
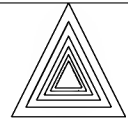
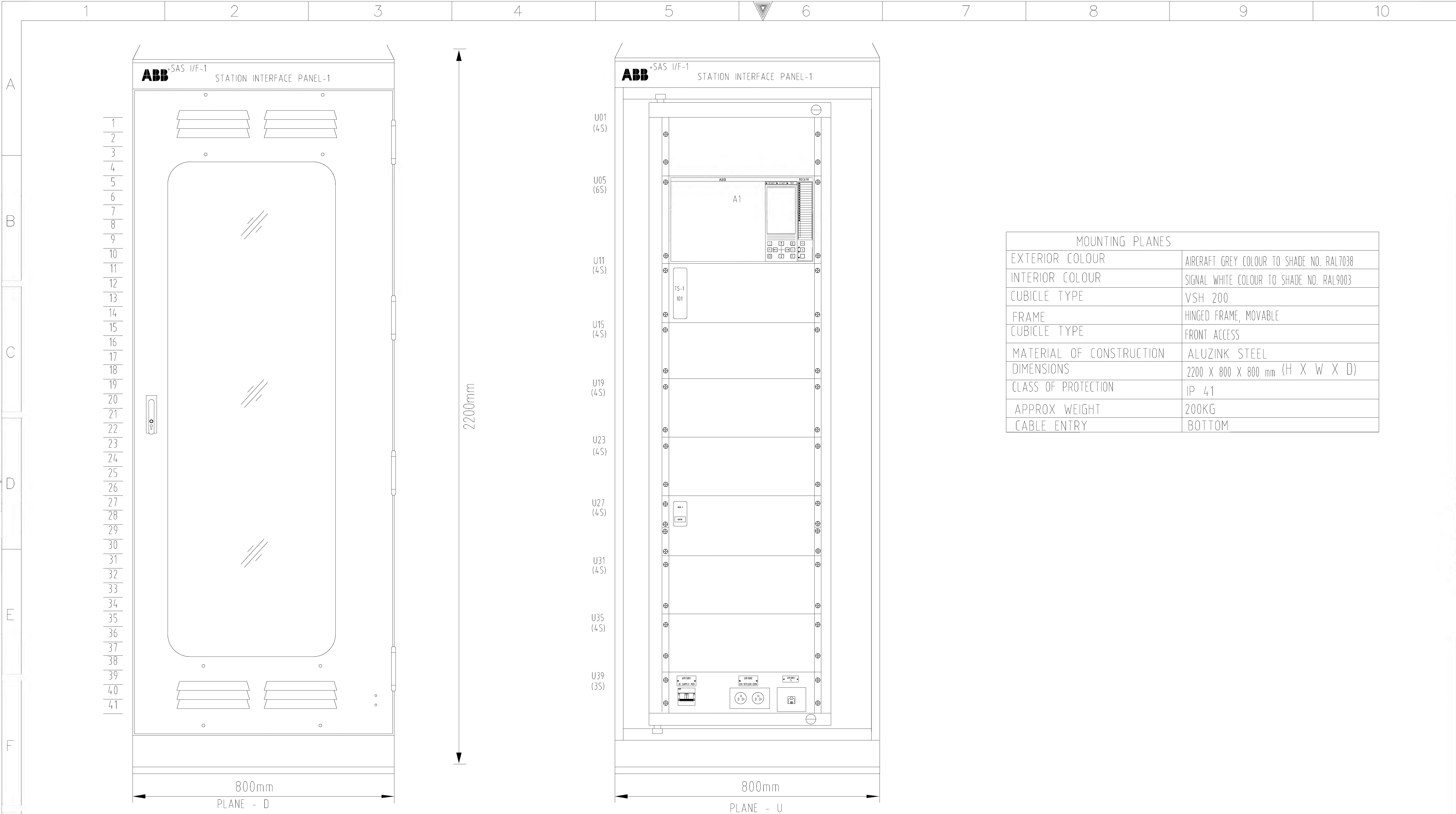


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01	13 48	AS MANUFACTURED
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DRAWN BY RIZ CHECKED BY JKR
DATE STARTED 15.3.2013 DATE COMPLETED _____
OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC

ASSEMBLY DRAWING

SAS INTERFACE PANEL +SAS I/F-1

S/S 8709

S-13656

RIYADH

SAUDI ARABIA

الشركة الوطنية لنقل الكهرباء



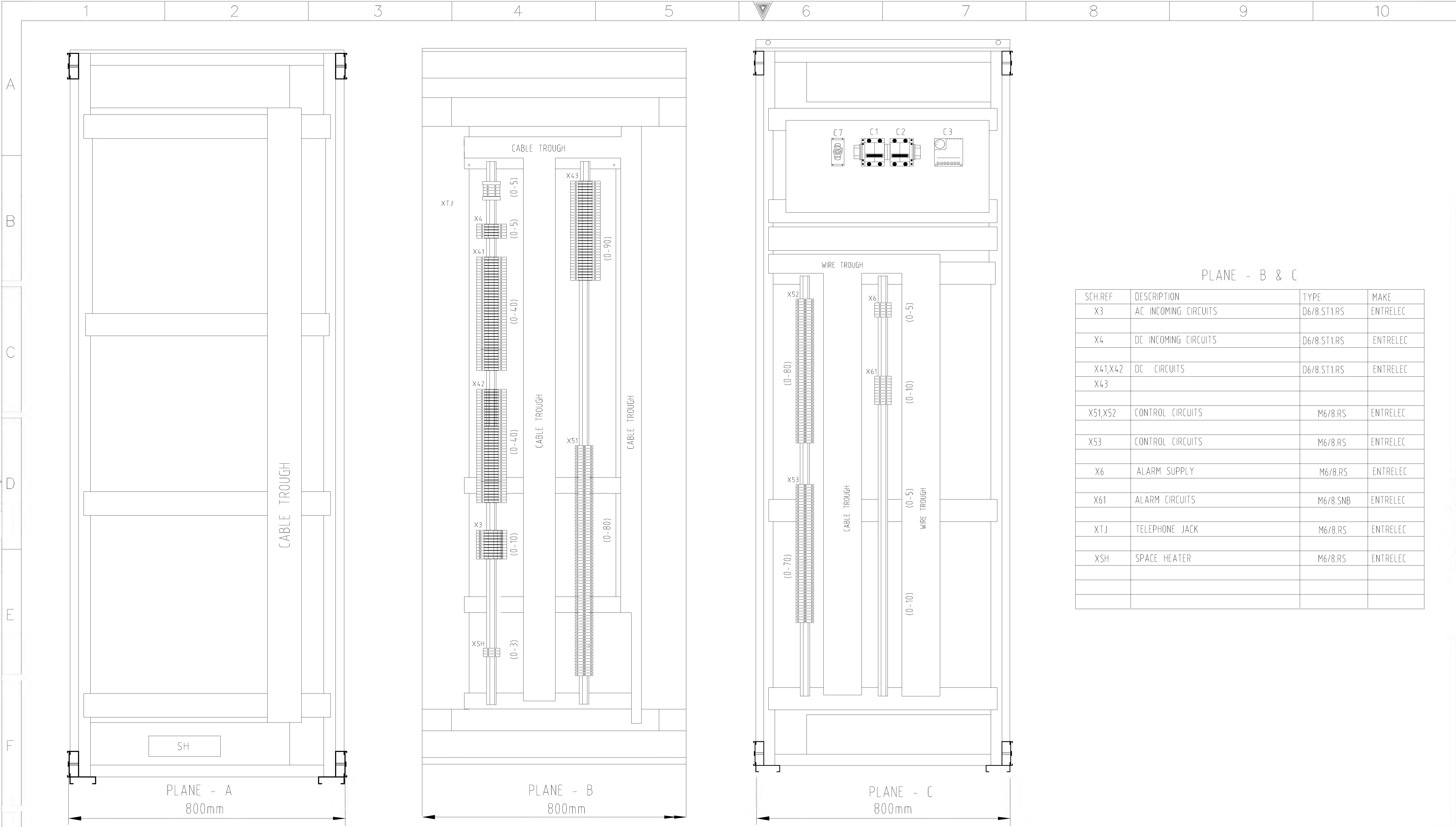
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P	C421	CD-322985	SHT CONT. G01 G02	01

NG/D2-D (2012/01)

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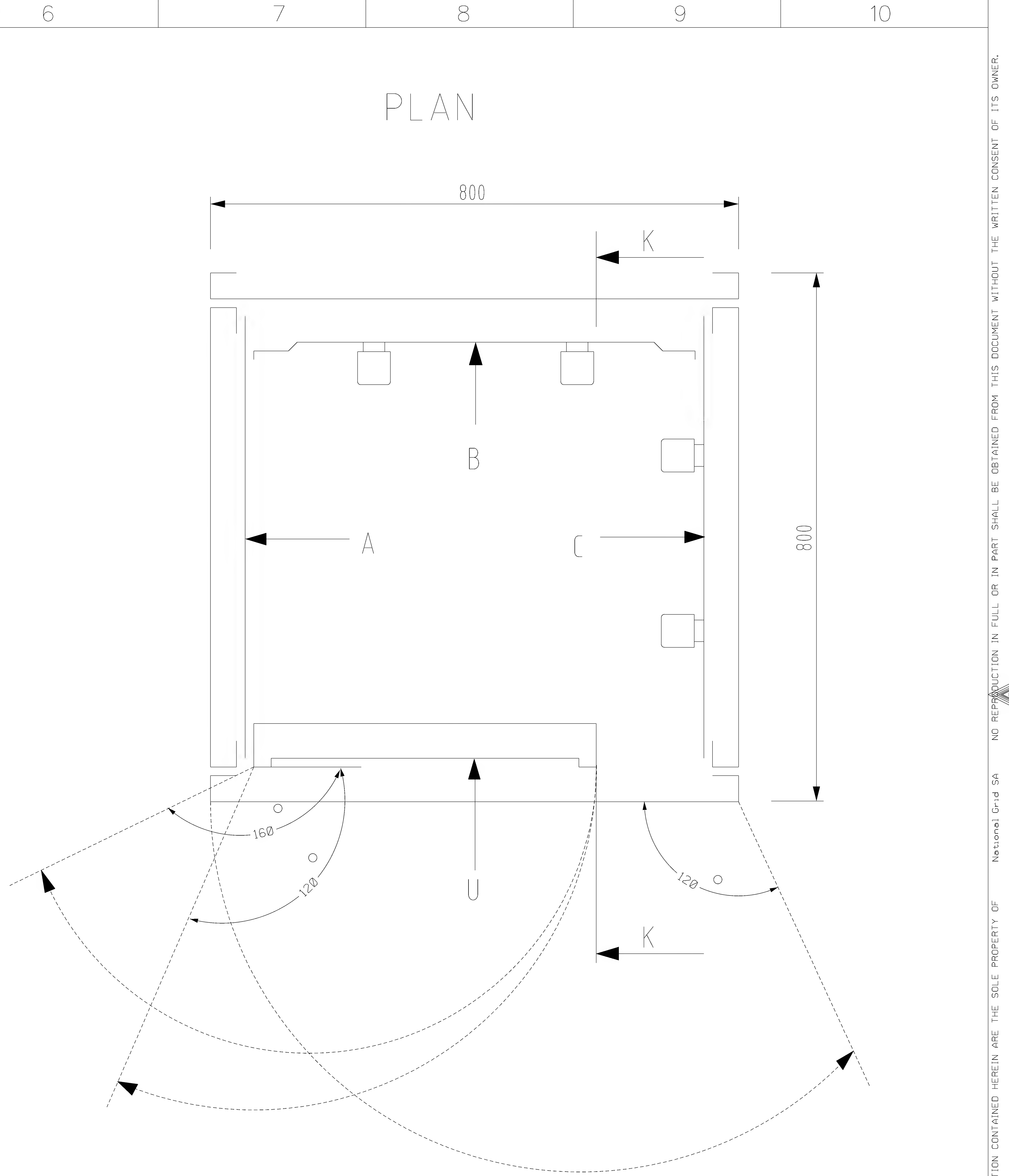
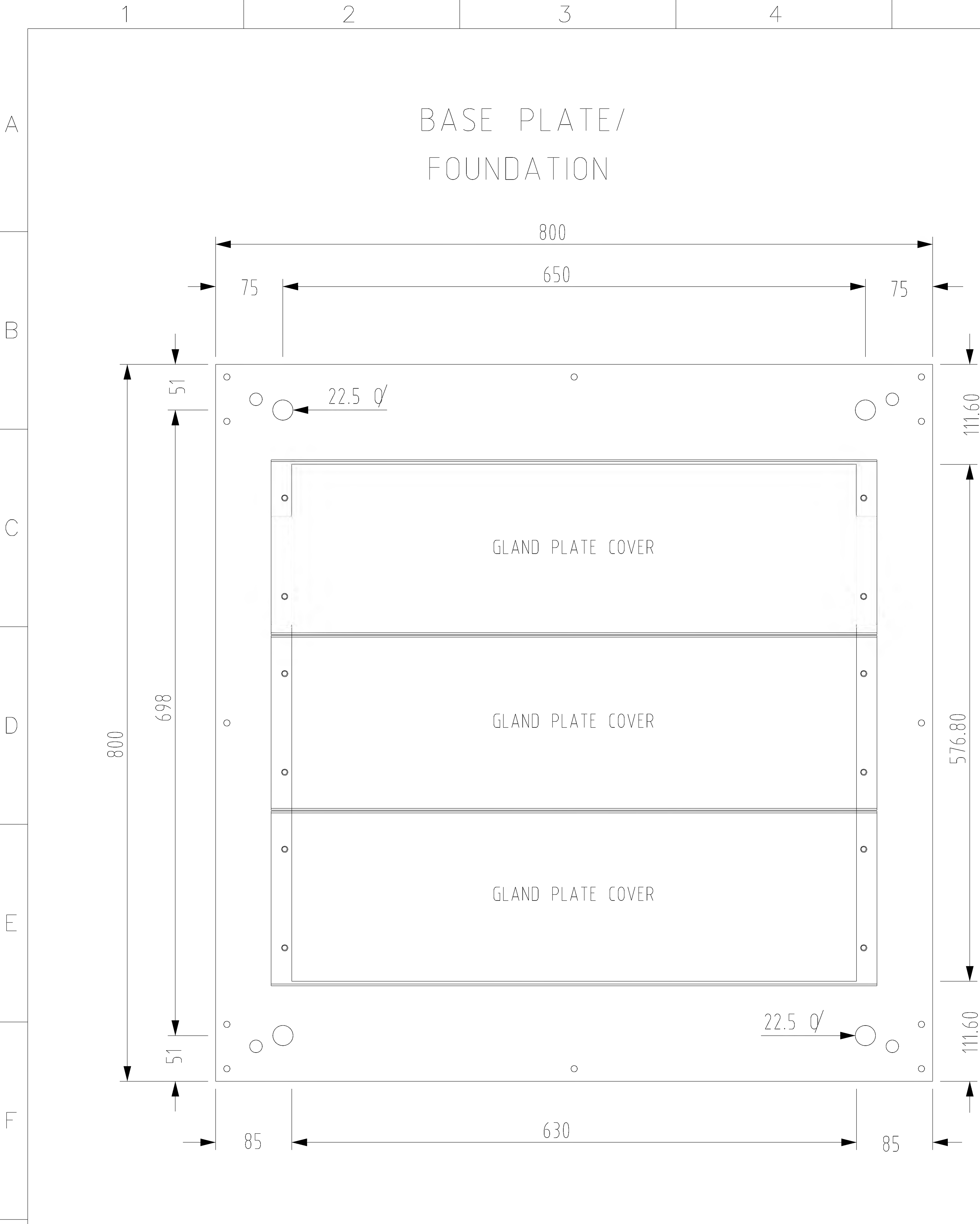
PLANE - B & C

SCH.REF	DESCRIPTION	TYPE	MAKE
X3	AC INCOMING CIRCUITS	D6/8.ST1.RS	ENTRELEC
X4	DC INCOMING CIRCUITS	D6/8.ST1.RS	ENTRELEC
X41,X42	DC CIRCUITS	D6/8.ST1.RS	ENTRELEC
X43			
X51,X52	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
X53	CONTROL CIRCUITS	M6/8.RS	ENTRELEC
X6	ALARM SUPPLY	M6/8.RS	ENTRELEC
X61	ALARM CIRCUITS	M6/8.SNB	ENTRELEC
XTJ	TELEPHONE JACK	M6/8.RS	ENTRELEC
XSH	SPACE HEATER	M6/8.RS	ENTRELEC

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ASSEMBLY DRAWING			
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						RIYADH		SAUDI ARABIA		
INDEX		PLANT NO.	DRAWING NUMBER			SHEET NO.		REV. NO.		
P		C421	CD-322985			SHT	CONT.	01		
						G02	G03			



الشركة الوطنية لنقل الكهرباء



AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ASSEMBLY DRAWING		الشركة الوطنية لنقل الكهرباء		نقل الكهرباء	
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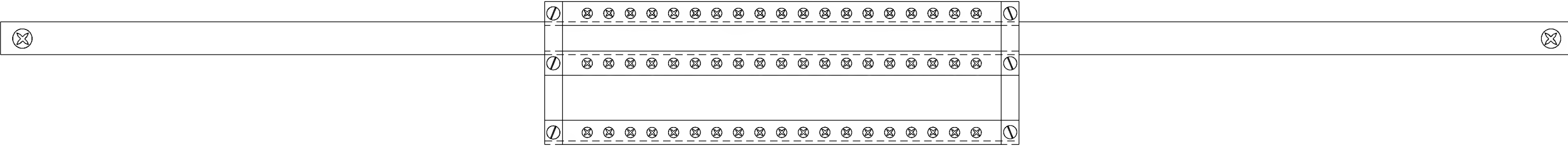
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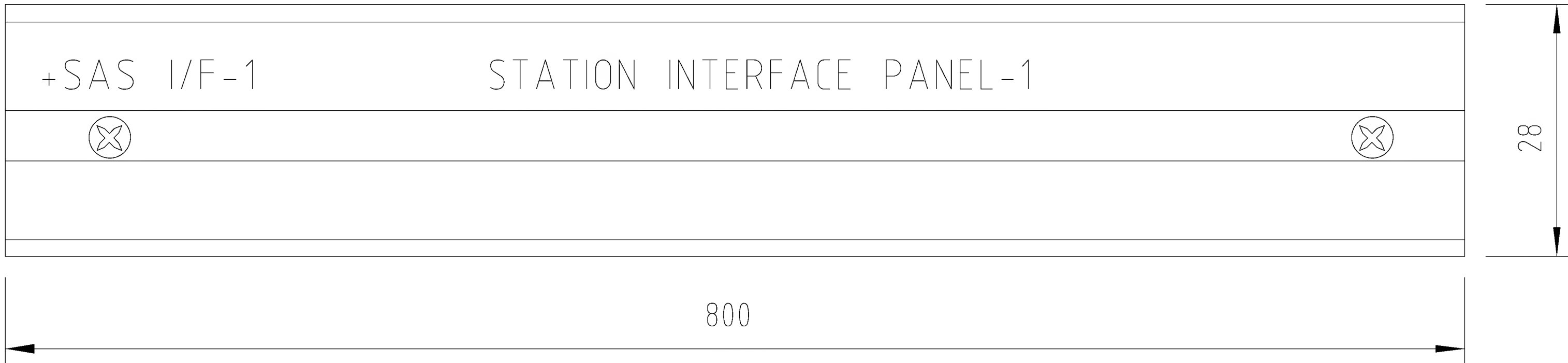
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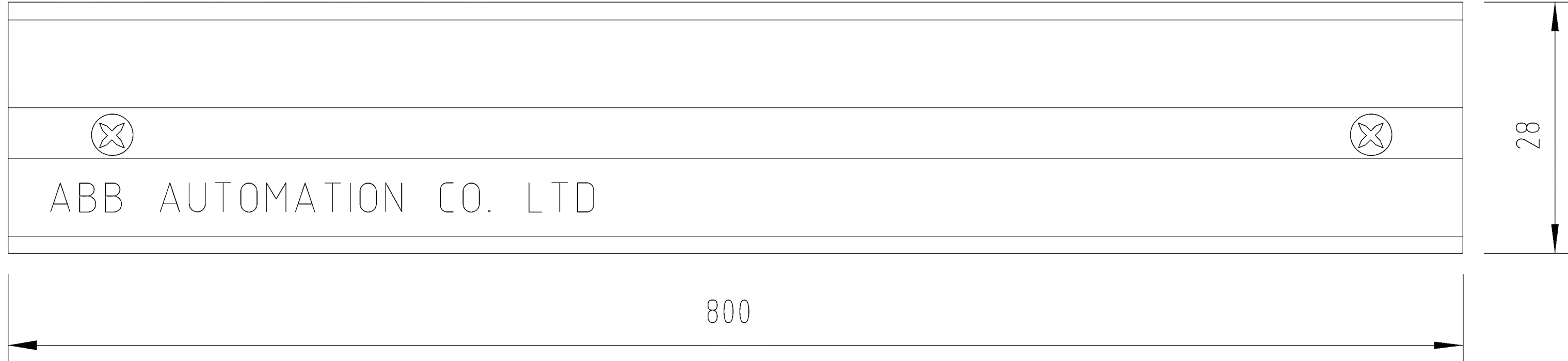


TOP VIEW FOR EARTHING BAR

U PLANE TOP LABEL



U PLANE BOTTOM LABEL



MANUFACTURING LABEL

ABB
ABB Automation Co.Ltd.

PROJECT : National Grid SA - S/S 8709

ORDER REFERENCE : 2875 RF S13656


YEAR OF MANUFACTURE : 2013

PANEL NO. : +SAS I/F-1

DRAWING NO. : S13656-CD-322986

MADE IN THE KINGDOM OF SAUDI ARABIA

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AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		ASSEMBLY DRAWING				<div><div>الشركة الوطنية لنقل الكهرباء</div><div> نقل الكهرباء National Grid sa</div></div>							
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SR. NO.	GA REF.	SCH. REF.	D E S C R I P T I O N	SHEET NO.	QTY.	TYPE	MAKE	ORDERING INFORMATION	COUNTRY OF ORIGIN
			STATION INTERFACE PANEL-1						
1	U05.5001	A1	STATION COMMON ALARM SWITCHING EQUIPMENT WITH FOLLOWING SPECIFICATION AUX : EL=90-250V DC FREQ : 50/60HZ BINARY INPUT : 14 NOS(PER CARD 16 INPUTS RL=110-125DC)	291 TO 296	1	REC 670	ABB	1MRK 002814-AC	SWEDEN
2	U11.101	TS-1	TEST SWITCH FOR REC 670 (A1)	245	1	RTXP18	ABB	RK 926 115-AN	SWEDEN
3	U27.101	74IF	DUAL TARGET RELAY (REVERSE FLAG) (A1 DC FAIL/SPARE) CONTACTS :1NO+2NC PER COIL AUX.VOLT :1NO+2NC PER COIL FLAG :SELF RESET	245	1	RXSF1	ABB	RK 271 019 AN	SWEDEN
4	U39.5001	Q1	MCB 2 POLE 6A, FOR DC SUPPLY WITH 2NC AUXILIARY CONTACT Q1 IF+ SUPPLY	216	1	S 282 UC-K6 S2-H02	ABB	GH S282 0164 R0377 GH S270 1916 R0003	GERMANY
5	U39.5002	C01 C02	CONVENIENCE OUTLET 10A, 127V AC CONVENIENCE OUTLET 10A, 220V AC	211	1	USM45 & USMS45	LEGRAND	74140 & 74180	FRANCE
		C1,C2	MINIATURE CIRCUIT BREAKER, 2 POLE, 10A FOR CONVENIENCE OUTLET WITH AUXILIARY SWITCH, 1NO + 1NC CONTACTS	211	2	S202P-K10 S2C-H11L	ABB	2CDS 253 001 R0104 2CDS 200 936 R0001	GERMANY
6		C3	THERMOSTAT FOR SPACE HEATER, 5-60 C	211	1	SK 3110	RITTAL	SK 3110	THIWAN
7	U39.5003	TJ	TELEPHONE JACK 1GANG 4WIRE	211	1	EDF410	EDISON	EDF410	SWEDEN
8		C7	ON/OFF SWITCH FOR SPACE HEATER	211	1	M2SS1-10B MCBH-10	ABB	1SFA 611 200 R1006 1SFA 611 605 R1101	
9		DS	DOOR SWITCH FOR CONTROL OF CUBICLE INTERNAL ILLUMINATION LAMP	211	1	LS30P	ABB	1SBV 010213 R1202	SWEDEN
10			INTERNAL ILLUMINATION CUBICLE LAMP SUITABLE FOR 127V AC, 60Hz SUPPLY, 20W	211	1	T-4	SUNON	SP-20W	
11		SH	SPACE HEATER, 150w, 120V, 60Hz	211	1	MICA	GRUPPO	1FZEK 006 C001	ITALY

AS-BUILT BY _____ DATE _____ CONTRACT NO. 11131113/00 JOB ORDER NO. S-13656

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00	13 20	FOR APPROVAL	OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC
REV. NO.	DATE	DESCRIPTION	

LIST OF APPARATUS

SAS INTERFACE PANEL +SAS I/F-1

S/S 8709 S-13656 RIYADH SAUDI ARABIA

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 نقل الكهرباء National Grid sa

INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
P	C421	CD-322985	L01	01

NG/D2-D (2012/01)

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INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
P	C421	CD-322985	SHT L02	CONT. L03 01

NG/D2-D (2012/01)

DMS

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NGD200

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LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE
U05.5001	U05.5001 A1	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm
U11.101	U11.101 TS-1	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm
U27.101	U27.101 74IF/SPARE	ALUMINUM PAPER FOIL	BLACK LETTERS	50X10mm	3mm

LABEL REF.	LABEL ENGRAVING	MATERIALS	ENGRAVING	LABEL SIZE	LETTER SIZE
C1	C1 127V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C2	C2 220V AC SUPPLY MCB	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C3	C3 THERMOSTAT	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
C7	C7 ON/OFF SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
DS	DS DOOR SWITCH	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
IL	IL ILLUMINATION LAMP	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm
SH	SH SPACE HEATER	TRAFOLITE	BLACK LETTERS ON WHITE BACKGROUND	50X15mm	4mm

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REV. NO.			DATE		DESCRIPTION		RIYADH SAUDI ARABIA								03		NIL	
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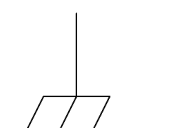
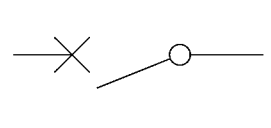
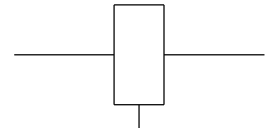
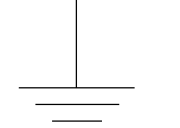
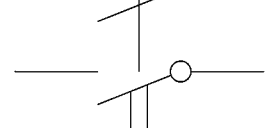
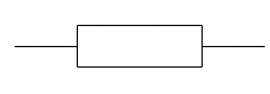
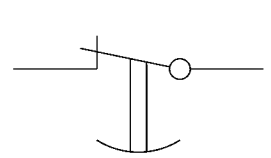
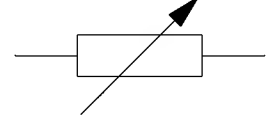
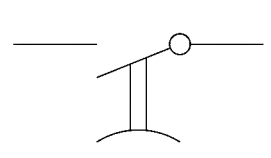
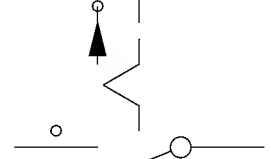
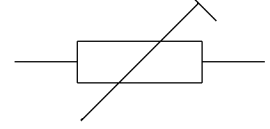
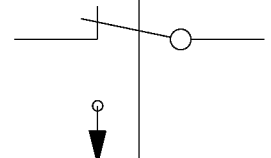
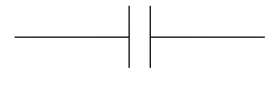
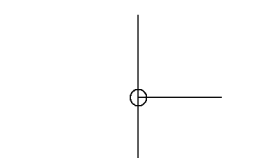
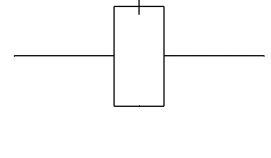
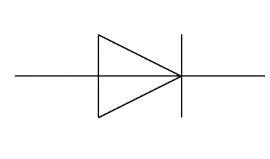
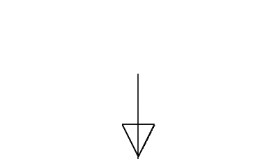
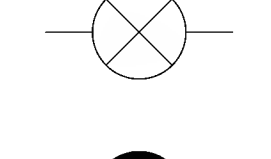
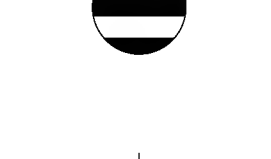
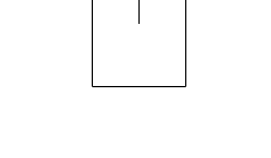
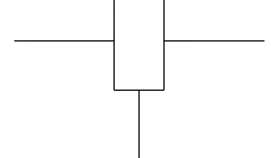
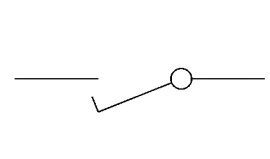
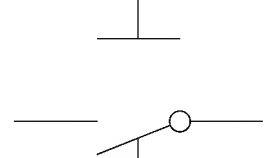
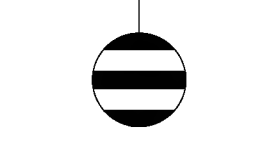
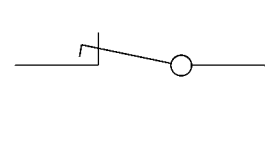
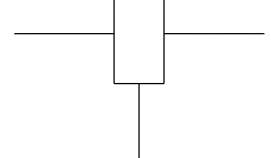
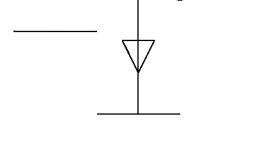
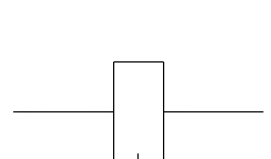
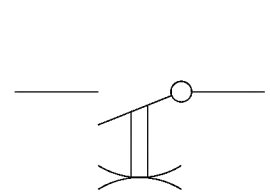
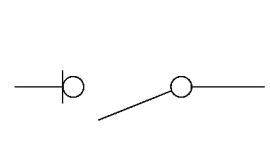
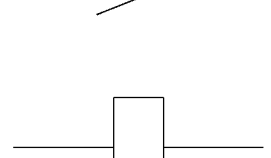
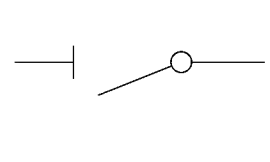
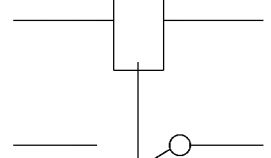
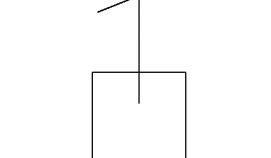
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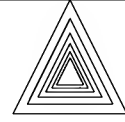
E

F

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FRAME CONNECTION		MAIN CONTACT OF A CIRCUIT BREAKER		RELAY WITH TWO MAKE CONTACTS, ONE OF THEM DELAYED WHEN OPERATING
	EARTH CONNECTION		PASSING MAKE CONTACT CLOSING MOMENTARILY DURING OPERATION AND RELEASE		RELAY WITH TWO ACTUATORS AND A TWO STABLE POSITIONS
	RESISTOR		BREAK CONTACT DELAYED WHEN OPERATING		
	VARIABLE RESISTOR		MAKE CONTACT DELAYED WHEN RELEASING		SIGNALLING LAMP
	RESISTOR WITH PRESET ADJUSTMENT		TWO MECHANICAL LINKS CROSSING WITHOUT CONNECTION		MECHANICAL INDICATOR WITH AUTOMATIC RESET
	CAPACITOR		JUNCTION OF MECHANICAL LINKS		MECHANICAL INDICATOR WITH NON-AUTOMATIC RESET
	SEMICONDUCTOR DIODE USED AS A CAPACITIVE DEVICE		AUTOMATIC RESET		ELECTRICALLY CONTROLLED MECHANICAL INDICATOR WITH AUTOMATIC RESET
	OPEN CONTACT, MAKE CONTACT		NON-AUTOMATIC RESET		ELECTRICALLY CONTROLLED MECHANICAL INDICATOR WITH NON-AUTOMATIC RESET
	CLOSED CONTACT, BREAK CONTACT		SWITCHING DEVICE WITH MANUAL OPERATION AND WITH AUTOMATIC RESET		RELAY WITH MAKE CONTACT
	CHANGE-OVER CONTACT, BREAK BEFORE MAKE		SWITCHING DEVICE WITH MANUAL OPERATION AND WITH NON-AUTOMATIC RESET		RELAY WITH CHANGE-OVER CONTACT
	MAKE CONTACT WHICH IS EARLY WHEN OPERATING AND LATE WHEN RELEASING		CHANGE-OVER SWITCHING DEVICE WITH MANUAL CONTROL		RELAY WITH MAKE CONTACT, DELAYED WHEN OPERATING
	BREAK CONTACT WHICH IS LATE WHEN OPERATING AND EARLY WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN OPERATING AND RELEASING
	SWITCHING DEVICE WITH MANUAL CONTROL		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING
	MAKE CONTACT DELAYED WHEN OPERATING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING
	BREAK CONTACT DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING
	MAKE CONTACT DELAYED WHEN OPERATING AND RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING
	MAIN CONTACT OF A SWITCH DISCONNECTOR		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING
	MAIN CONTACT OF A DISCONNECTOR		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING		RELAY WITH MAKE CONTACT, DELAYED WHEN RELEASING

G

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		GRAPHICAL SYMBOLS FOR DIAGRAMS		الشركة الوطنية لنقل الكهرباء		نقل الكهرباء National Grid sa	
DRAWN BY RIZ CHECKED BY JKR			DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709		S-13656		INDEX		PLANT NO.	
DATE STARTED 15.3.2013 DATE COMPLETED _____			OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		SAUDI ARABIA		SAUDI ARABIA		DRAWING NUMBER		SHEET NO.	
FOR APPROVAL					RIYADH		SAUDI ARABIA		CD-322986		REV. NO.	
REV. NO.			DATE		DESCRIPTION				P		01	



	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FUSE / LINK		WATTMETER		ELEMENT WITH NEGATED INHIBITING INPUT
	FUSE WITH THE SUPPLY SIDE INDICATED		VARMETER		ELEMENT WITH INPUT WHICH DOES NOT CARRY ANY LOGIC INFORMATION
	SINGLE-PHASE TRANSFORMER WITH TWO SEPARATE WINDINGS (TWO ALTERNATIVE FORMS)		POWER FACTOR METER		ELEMENT WITH POSTPONED OUTPUT
	SINGLE-PHASE TRANSFORMER WITH THREE SEPARATE WINDINGS (TWO ALTERNATIVE FORMS)		POSITION INDICATOR		AND-ELEMENT WITH TWO INPUTS
	SINGLE-PHASE TRANSFORMER WITH FERRO MAGNETIC CORE		SYNCHROSCOPE		OR-ELEMENT WITH TWO INPUTS
	SINGLE-PHASE VOLTAGE TRANSFORMER (MULTI-LINE AND SINGLE-LINE REPRESENTATION)		RECORDING VOLTMETER		LOGIC THRESHOLD ELEMENT WITH FOUR INPUTS AND THRESHOLD VALUE 2
	SINGLE-PHASE VOLTAGE TRANSFORMER WITH TWO SECONDARY WINDINGS (MULTI-LINE AND SINGLE-LINE REPRESENTATION)		RECORDING WATTMETER		ELEMENT WITH THREE INPUTS FOR "2 AND ONLY 2"
	CURRENT TRANSFORMER (MULTI-LINE AND SINGLE-LINE REPRESENTATION)		HOUR METER		EXCLUSIVE OR-ELEMENT WITH THREE INPUTS
	CURRENT TRANSFORMER WITH TWO CORES (MULTI-LINE AND SINGLE-LINE REPRESENTATION)		WATT-HOUR METER		LOGIC IDENTITY ELEMENT WITH THREE INPUTS
	CURRENT TRANSFORMER WITH TWO SECONDARY WINDINGS ON ONE CORE (MULTI-LINE AND SINGLE-LINE REPRESENTATION)		WATT-HOUR METER FOR ENERGY FROM A BUSBAR SYSTEM		MAJORITY ELEMENT WITH THREE INPUTS
	FILTER		ELEMENT WITH STATIC INPUT		NEGATOR
	HIGH-PASS FILTER		ELEMENT WITH STATIC NEGATED INPUT		NAND ELEMENT WITH TWO INPUTS
	BAND-PASS FILTER		ELEMENT WITH STATIC NEGATED OUTPUT		NOR ELEMENT WITH TWO INPUTS
	VOLTMETER		ELEMENT WITH DYNAMIC INPUT		BISTABLE ELEMENT
	AMMETER		ELEMENT WITH DYNAMIC NEGATED INPUT		
			ELEMENT WITH INHIBITING INPUT		

	1	2	3	4	5	6	7	8	9	10
A										
B										
C										
D										
E										
F										

LEGENDS

±R1	DC SUPPLY - MAIN PROTECTION
±R2	DC SUPPLY - SECONDARY PROTECTION
±R3	DC SUPPLY - BACK UP PROTECTION
±IT	DC SUPPLY - INTER TRIP
FL	DC SUPPLY - FLASHING CIRCUIT
BB RS±	DC SUPPLY - BUS BAR - PROTECTION RESET
BB CBF±/CBF±	DC SUPPLY - CBF PROTECTION
R	RESET BUS - ALARM SYSTEM
CR	CONTROL ROOM
ECC	ENERGY CONTROL CENTRE
LOCAL	THE LOCATION OF CONTROLLED DEVICE
REMOTE	ANY OTHER LOCATION NOT LOCAL
ON	CB NORMALLY OPEN AUXILIARY CONTACT
OFF	CB NORMALLY CLOSED AUXILIARY CONTACT
A	COMMON
T	TEST POSITION
S	SERVICE POSITION
CS	CLOSE IN SERVICE POSITION
CT	CLOSE IN TEST POSITION
LS	LOCAL SERVICE
LT	LOCAL TEST
LC	LOCAL CLOSE
LO	LOCAL OPEN
RO	REMOTE OPEN

NOTES

LABELS

WHITE LABEL WITH BLACK LETTERING WILL BE PROVIDED FOR ALL MOUNTED APPARATUS EQUIPMENT IDENTIFICATION AND FUNCTION REFERENCE LABEL WILL BE PROVIDED FOR FRONT MOUNTED EQUIPMENTS OF THE PANEL AND EQUIPMENT IDENTIFICATION LABEL WILL BE PROVIDED FOR INTERNALLY MOUNTED EQUIPMENTS

WIRING

PVC INSULATED 600V GRADE
2.5 SQ.mm. YELLOW COLOURED FOR CT CIRCUITS
2.5 SQ.mm. RE COLOURED FOR VT CIRCUITS
1.5 SQ.mm. GREY COLOURED FOR DC SUPPLY, SCADA AND CONTROL CIRCUITS
1.5 SQ.mm. BLUE COLOURED FOR COMMON ALARM SIGNALS
2.5 SQ.mm. BLACK COLOURED FOR AVC AND AC CIRCUITS
2.5 SQ.mm. YELLOW/GREEN COLOURED FOR EARTHING CONNECTIONS
FOLLOWING MARKERS SHALL BE PROVIDED ON FOLLOWING WIRES:
+ SIGN FOR DC + WIRE
- SIGN FOR DC - WIRE

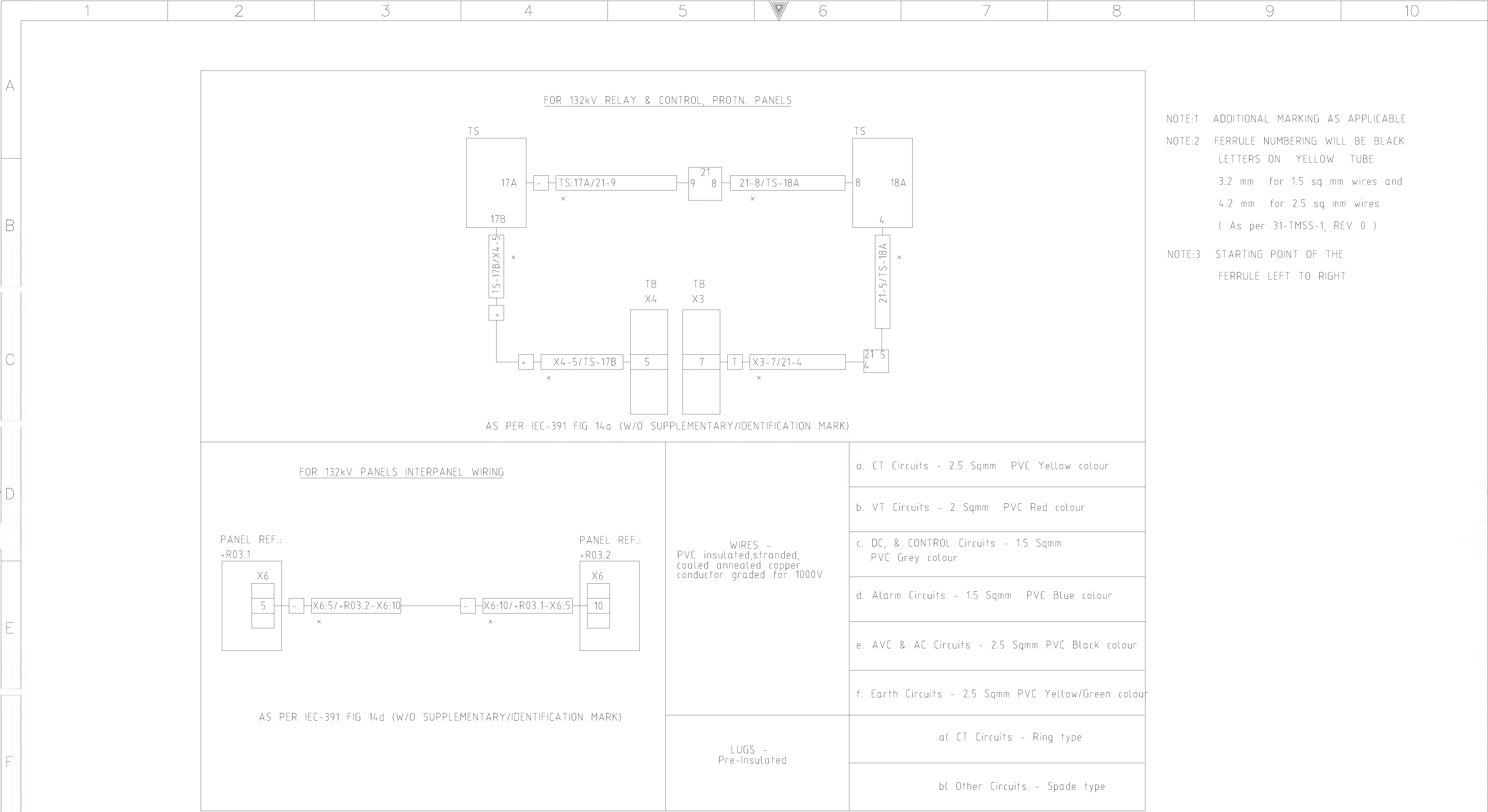
LUGS

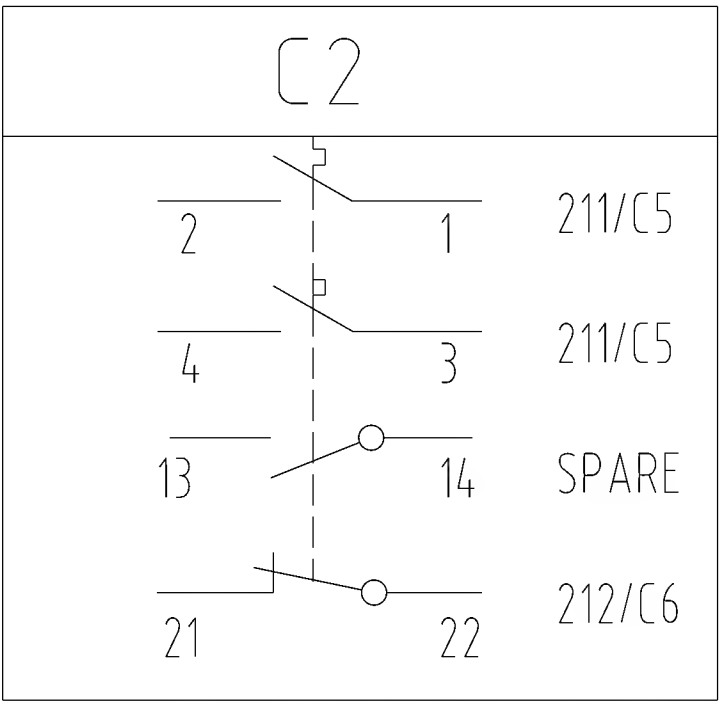
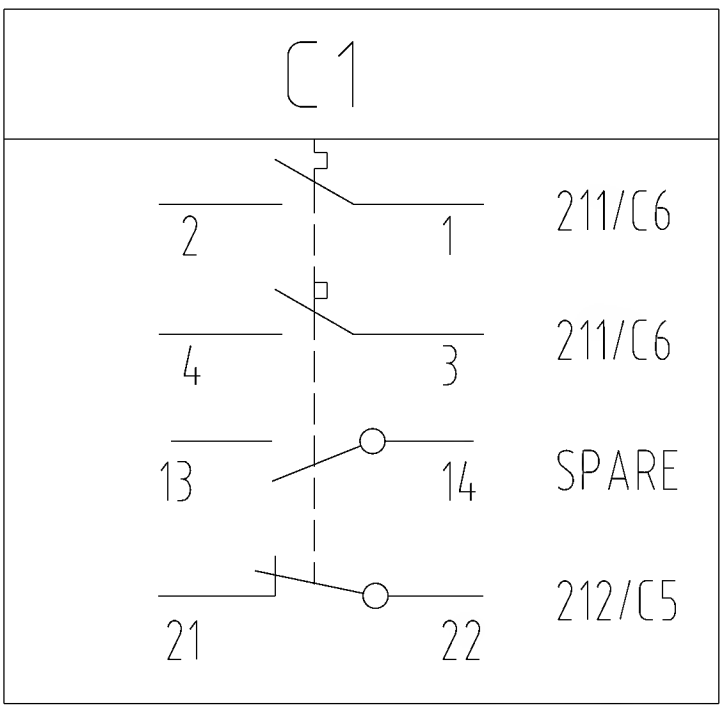
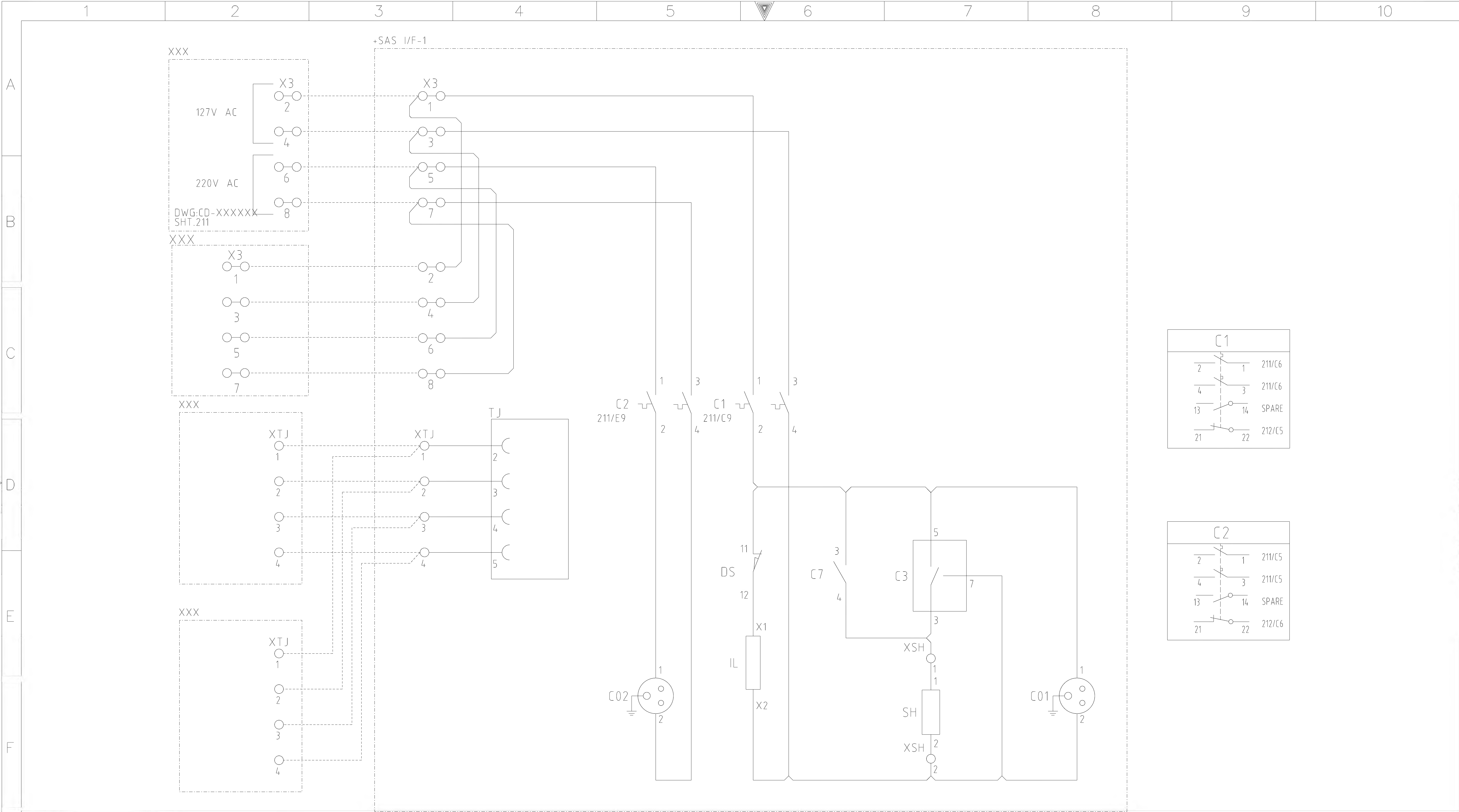
A. CT CIRCUITS- RING TYPE
B. OTHER CIRCUITS - SPADE TYPE


FERULLING

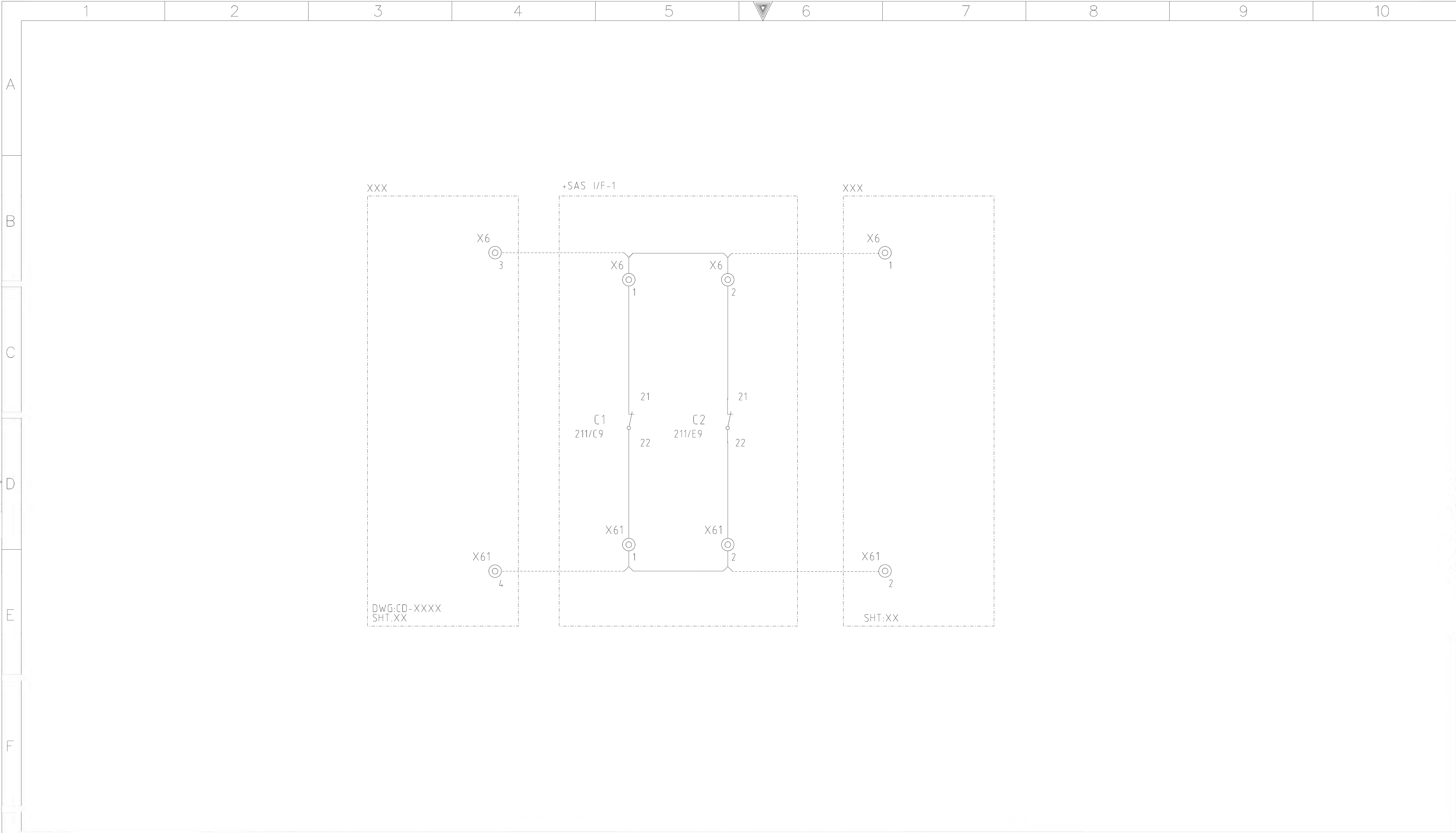
YELLO TUBE 3.2 mm FOR 1.5SQ mm WIRES AND 4.2 FOR 2.5 SQ mm WIRES (AS PER 31 - TMSS-1, RE.0)

AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		COMMON LEGENDS				الشركة الوطنية لنقل الكهرباء				 نقل الكهرباء	
G					DRAWN BY _____ RIZ _____ CHECKED BY _____ JKR		SAS INTERFACE PANEL +SAS I/F-1									
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709 S-13656				INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	
	00	13 20	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA				P	C421	CD-322986		SHT	REV. NO.
	REV. NO.	DATE	DESCRIPTION												CONT.	01

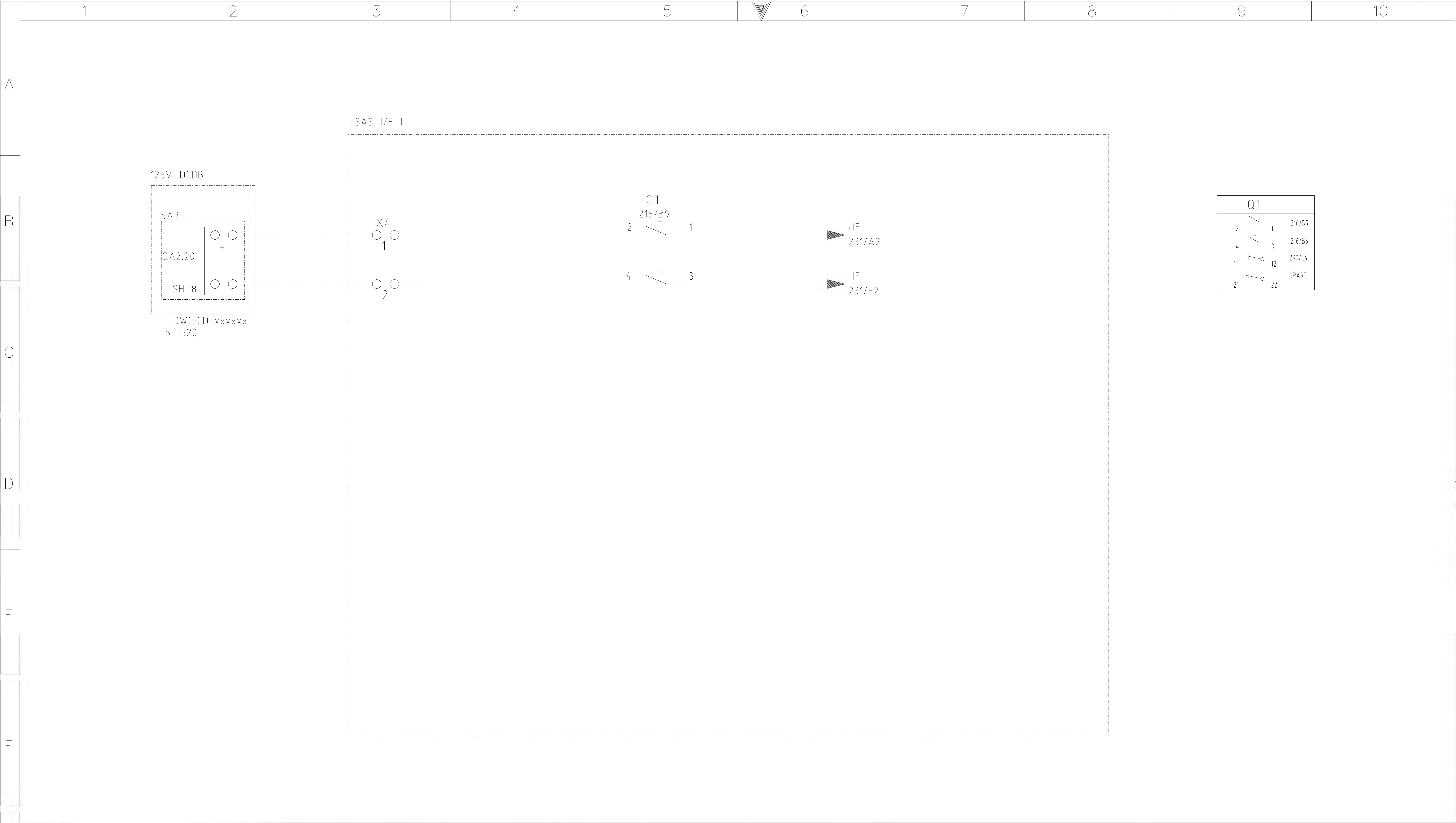




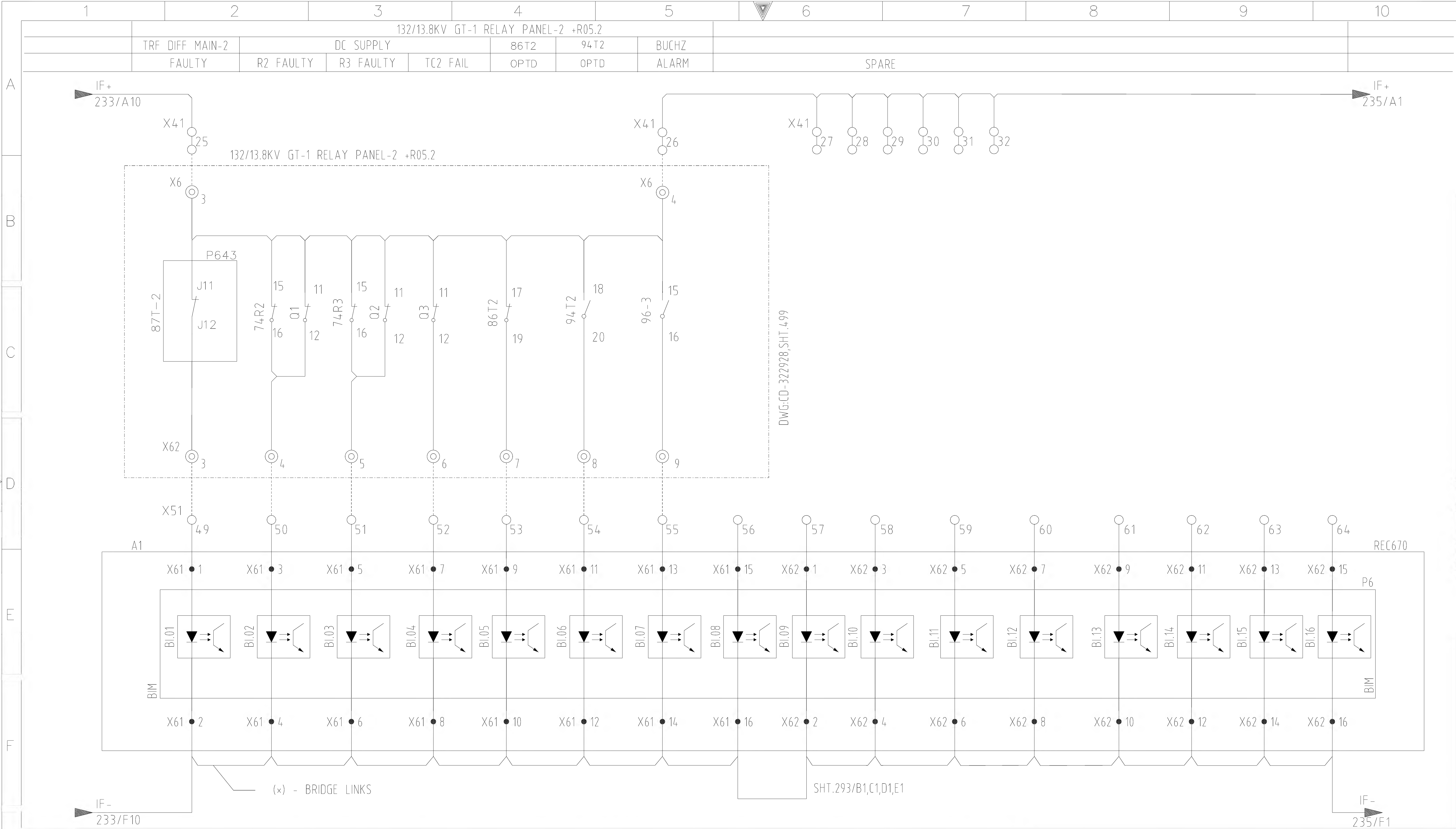
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					DRAWN BY RIZ CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-1						National Grid sa		
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709 S-13656		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA		P	C421	CD-322986		SHT 211	CONT. 212	01
	REV. NO.	DATE	DESCRIPTION												



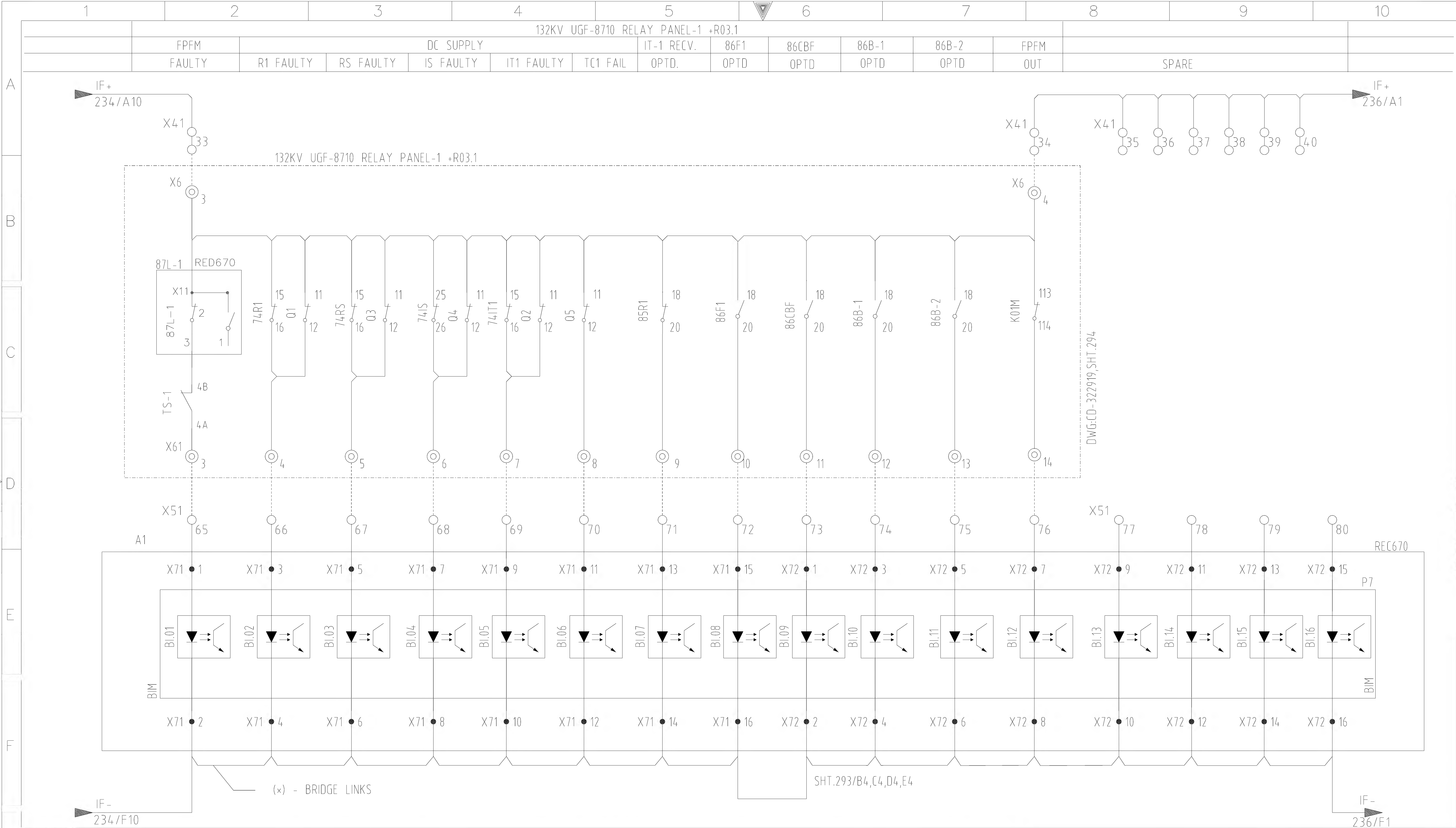
AS-BUILT BY _____ DATE _____			CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		SUPPLY AUXILARY CONTACTS				<div>الشركة الوطنية لنقل الكهرباء</div> <div>نقل الكهرباء</div> <div>National Grid sa</div>													
					DRAWN BY _____ RIZ _____ CHECKED BY _____ JKR _____		SAS INTERFACE PANEL +SAS I/F-1																	
G	01		13 48		AS MANUFACTURED		DATE STARTED 15.3.2013		DATE COMPLETED _____		S/S 8709		S-13656		INDEX		PLANT NO.		DRAWING NUMBER		SHEET NO.		REV. NO.	
	00		13 20		FOR APPROVAL						RIYADH		SAUDI ARABIA		P		C421		CD-322986		SHT		CONT.	
			DATE		DESCRIPTION		OPRG. DEPT. _____ CTPD _____		ENG. DEPT. _____ AUT-PSAC _____												212		216	
																						01		



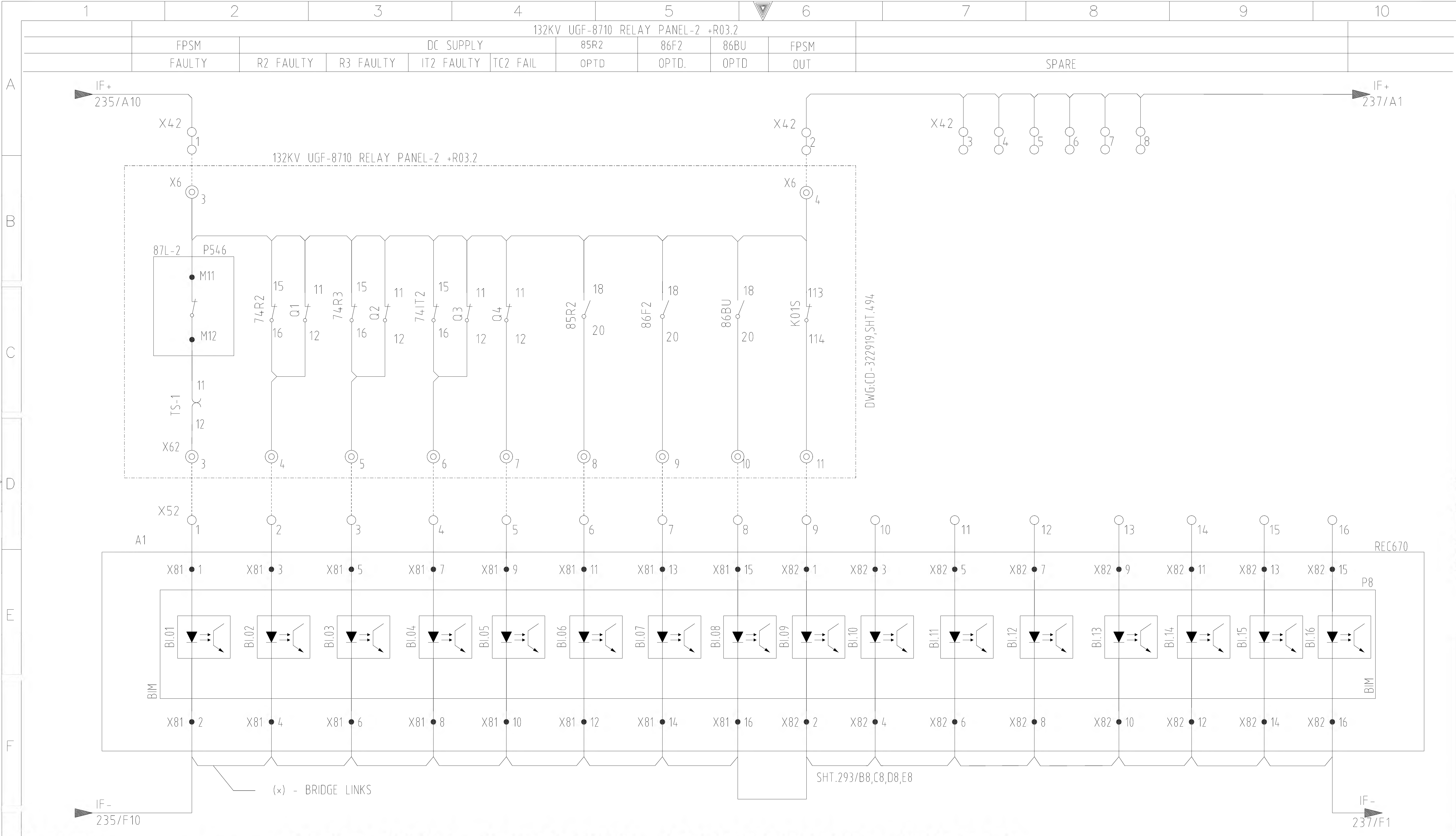
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			DRAWN BY RIZ		CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-1												
G	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013		DATE COMPLETED _____		S/S 8709		S-13656		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL						RIYADH		SAUDI ARABIA		P	C421	CD-322986		SHT	CONT.	01
	REV. NO.	DATE	DESCRIPTION		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC										216	231	



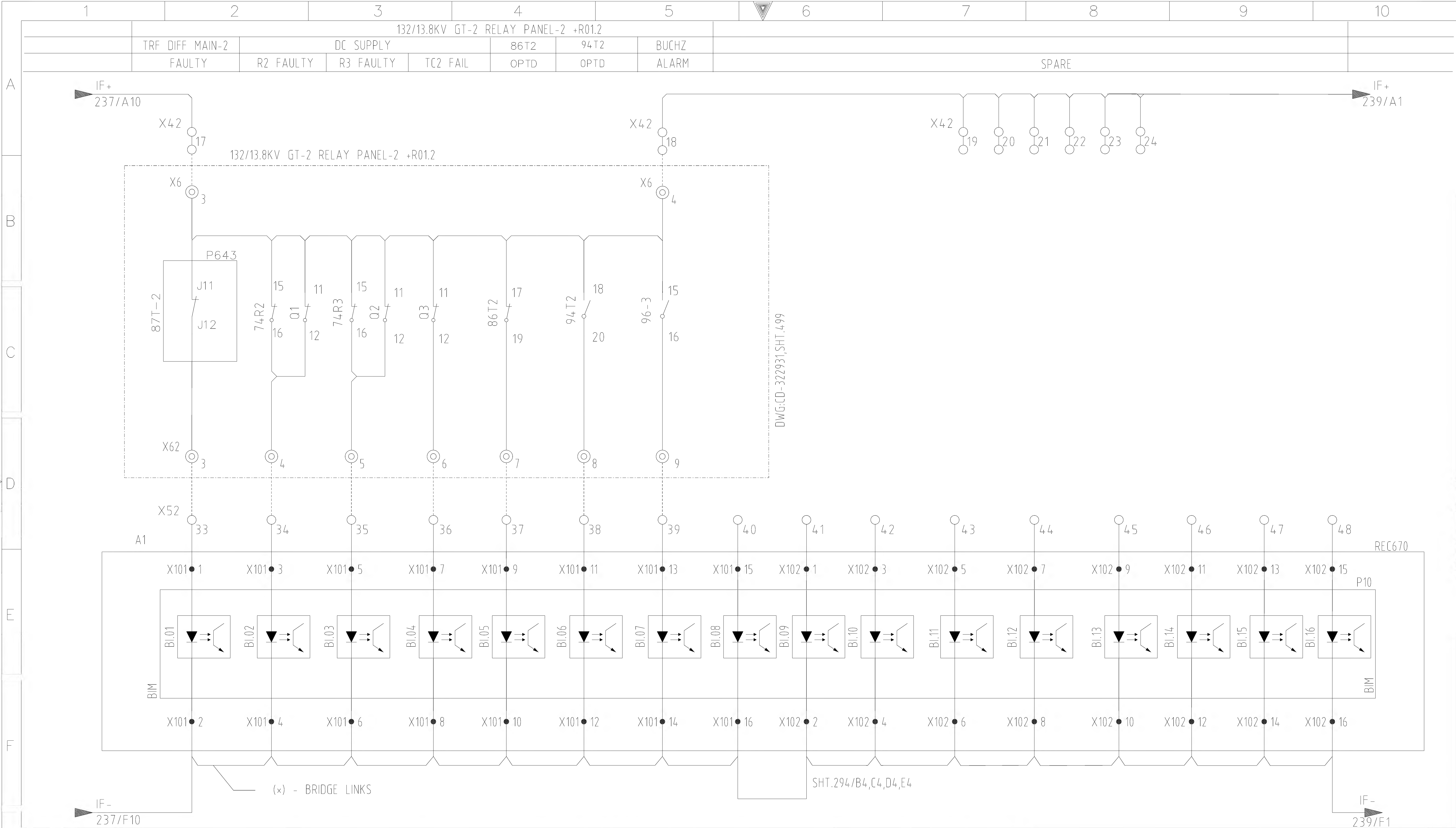
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									SAS INTERFACE PANEL +SAS I/F-1												
	01	13 48	AS MANUFACTURED			DRAWN BY RIZ		CHECKED BY JKR		S/S 8709				S-13656		INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL			DATE STARTED 15.3.2013		DATE COMPLETED		RIYADH				SAUDI ARABIA					SHT	CONT.	
	REV. NO.	DATE	DESCRIPTION			OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC											234	235	



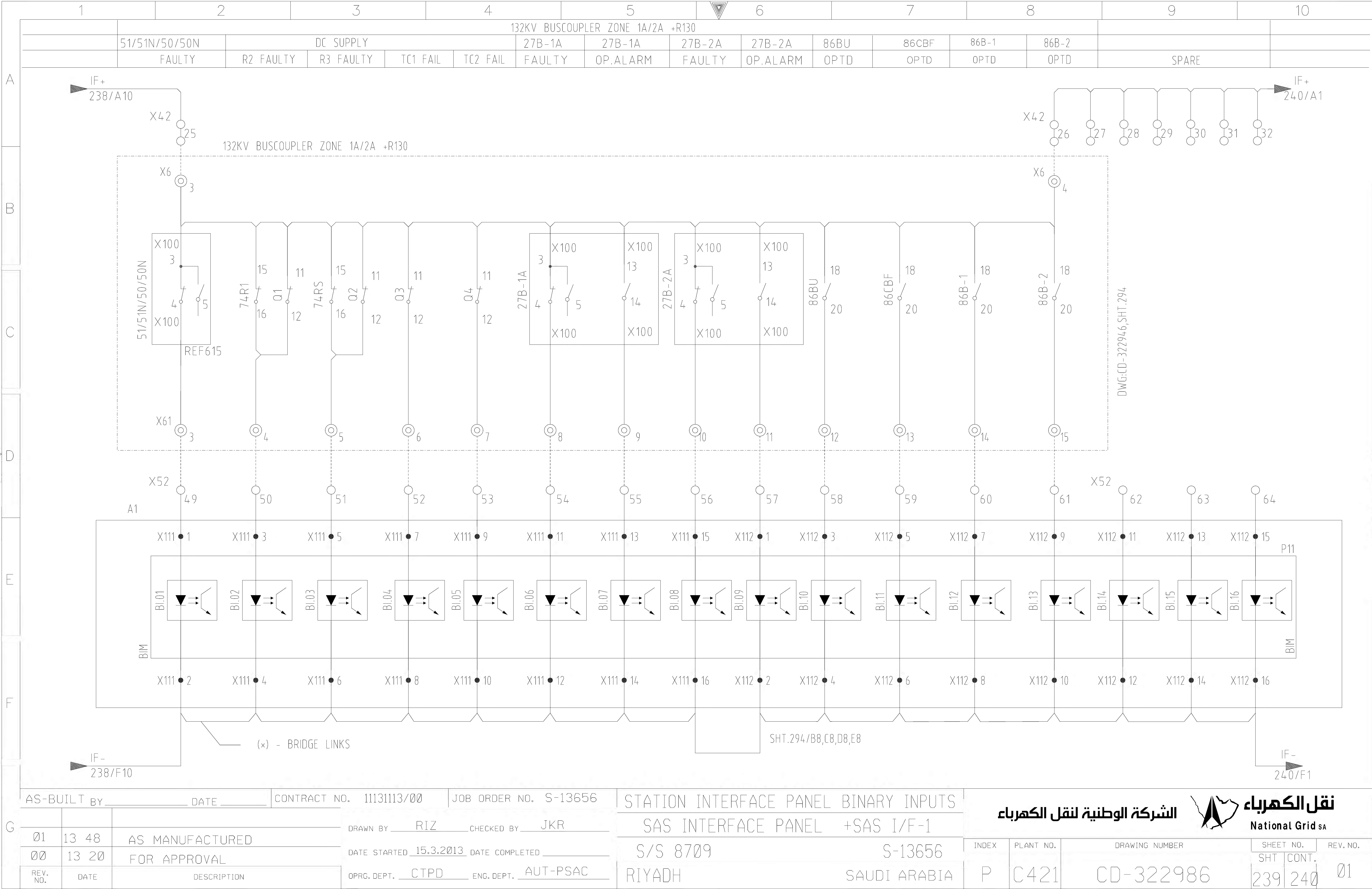
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					DRAWN BY RIZ CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-1				National Grid sa						
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709 S-13656				INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH SAUDI ARABIA				P	C421	CD-322986		SHT	CONT.	01
	REV. NO.	DATE	DESCRIPTION												235	236	



G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		STATION INTERFACE PANEL BINARY INPUTS		<div>نقل الكهرباء</div> <div>الشركة الوطنية لنقل الكهرباء</div> <div>National Grid sa</div>						
				DRAWN BY RIZ	CHECKED BY JKR	SAS INTERFACE PANEL +SAS I/F-1									
	01	13 48	AS MANUFACTURED	DATE STARTED 15.3.2013		DATE COMPLETED _____		S/S 8709	S-13656	INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.	REV. NO.
	00	13 20	FOR APPROVAL	OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH	SAUDI ARABIA	P	C421	CD-322986		SHT 236	CONT. 237
	REV. NO.	DATE	DESCRIPTION												



G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		STATION INTERFACE PANEL BINARY INPUTS				الشركة الوطنية لنقل الكهرباء						نقل الكهرباء	
					DRAWN BY RIZ CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-1								National Grid sa			
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709		S-13656		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.	
	00	13 20	FOR APPROVAL		OPRG. DEPT. CTPD ENG. DEPT. AUT-PSAC		RIYADH		SAUDI ARABIA		P	C421	CD-322986		SHT 238 CONT. 239		01	
	REV. NO.	DATE	DESCRIPTION															



الشركة الوطنية لنقل الكهرباء

نقل الكهرباء

National Grid sa

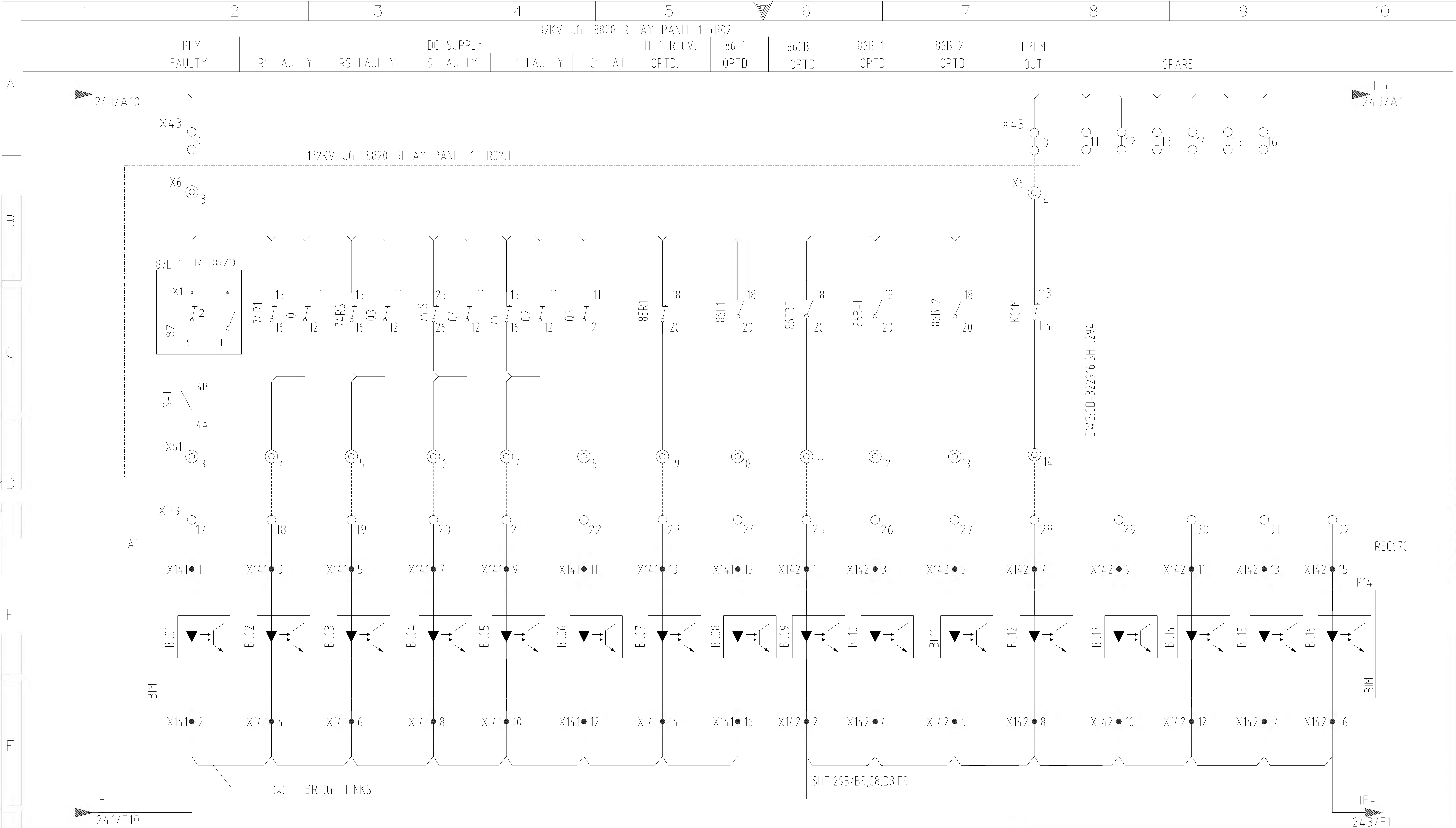
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DMS

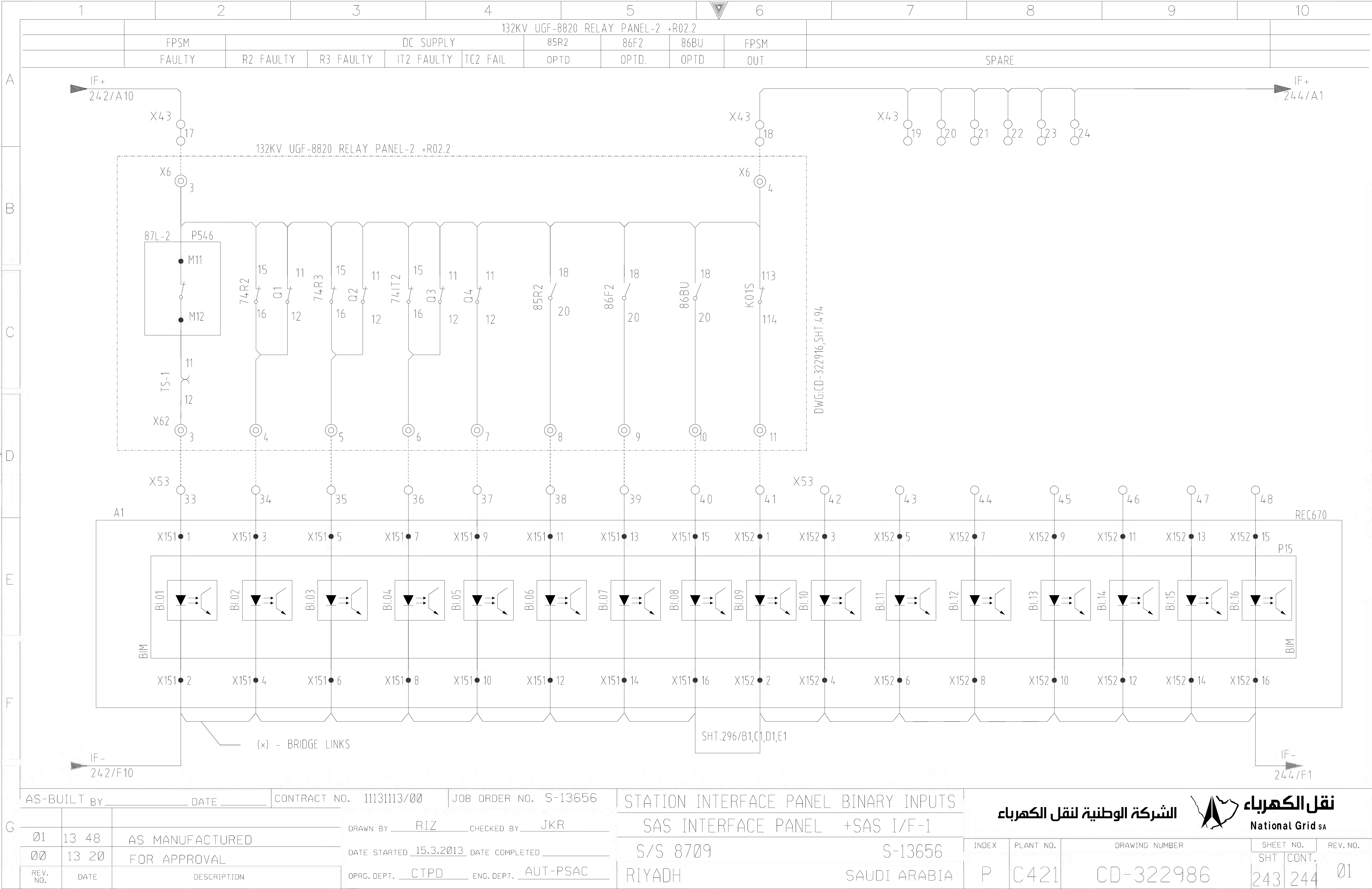
VECTOR

NGD200

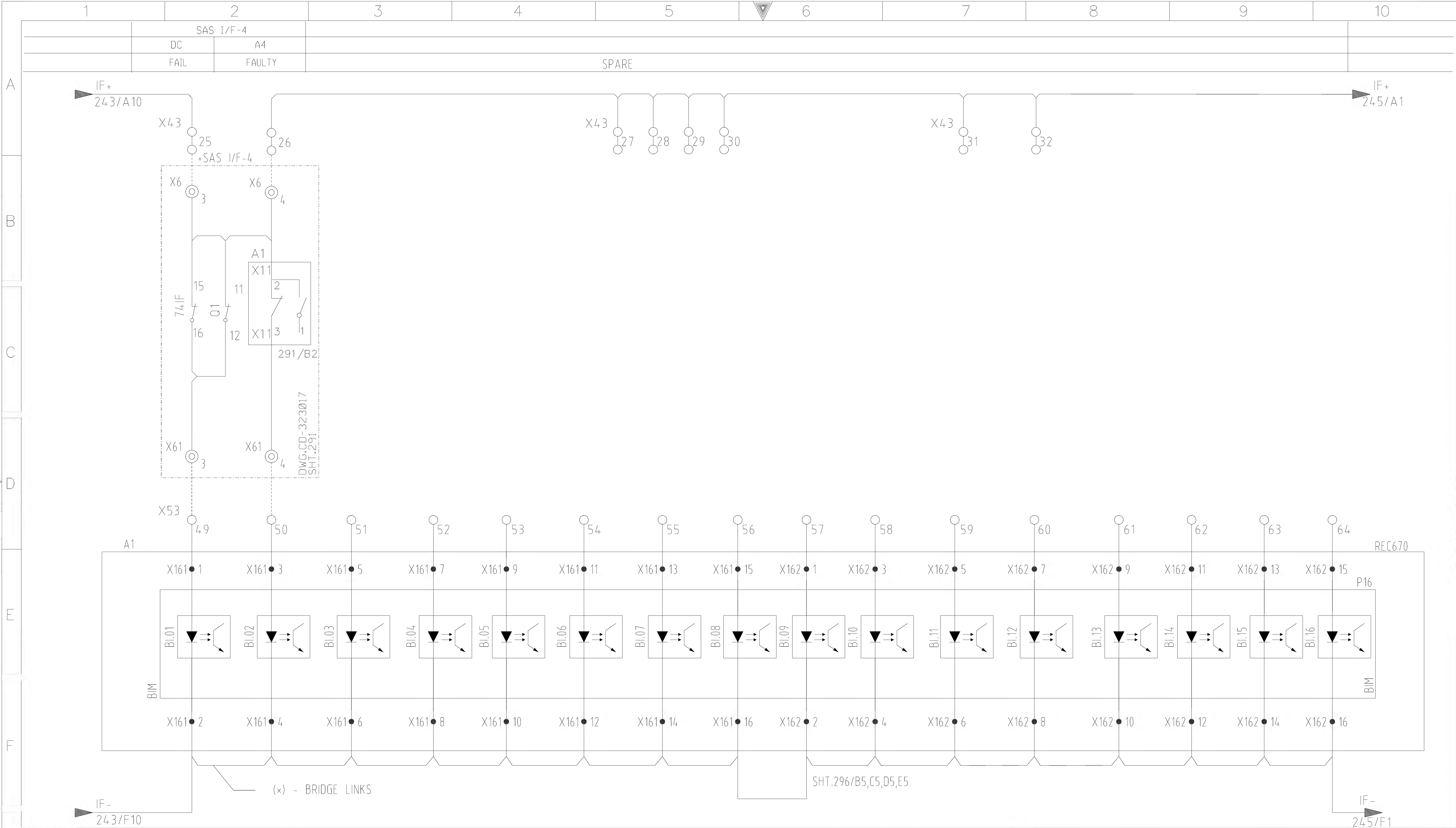
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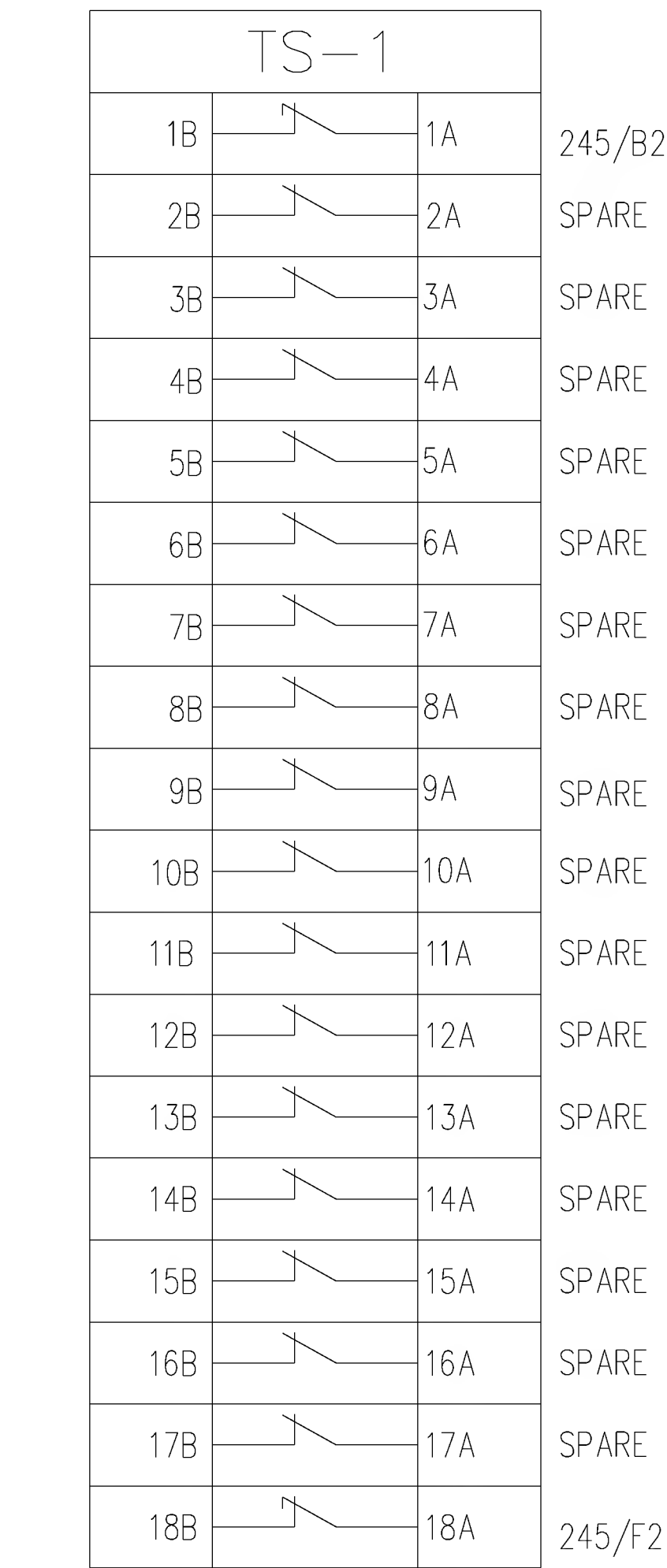
G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		STATION INTERFACE PANEL BINARY INPUTS				<div>نقل الكهرباء</div> <div>الشركة الوطنية لنقل الكهرباء</div> <div>National Grid sa</div>						
					DRAWN BY <u> RIZ </u> CHECKED BY <u> JKR </u>		SAS INTERFACE PANEL +SAS I/F-1										
	01	13 48	AS MANUFACTURED		DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____		S/S 8709		S-13656		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH		SAUDI ARABIA		P	C421	CD-322986		SHT	CONT.	01
	REV. NO.	DATE	DESCRIPTION												242	243	



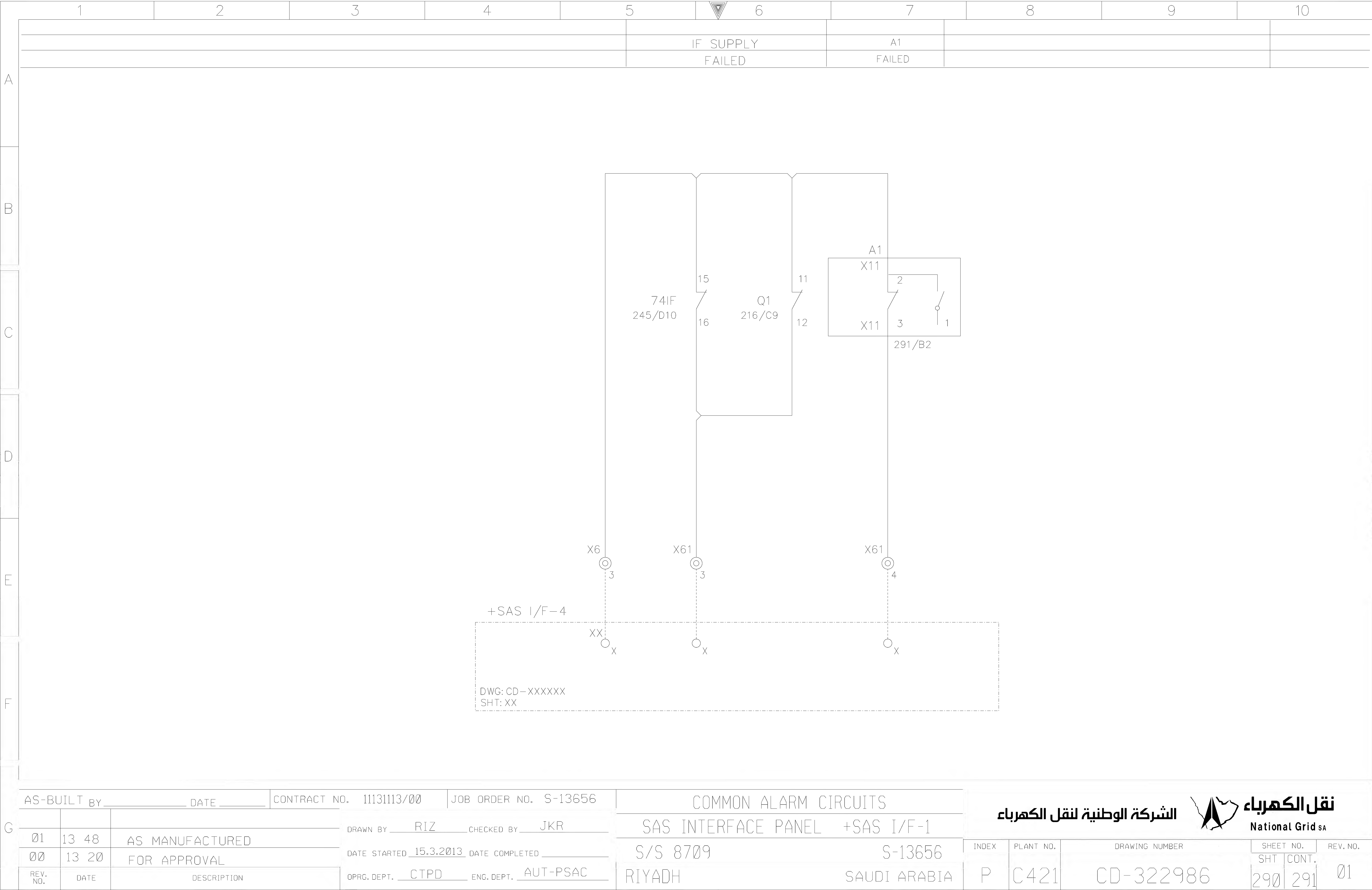
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G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		STATION INTERFACE PANEL BINARY INPUTS				<div>نقل الكهرباء</div> <div>الشركة الوطنية لنقل الكهرباء</div> <div>National Grid sa</div>						
					DRAWN BY <u> RIZ </u> CHECKED BY <u> JKR </u>		SAS INTERFACE PANEL +SAS I/F-1										
	01	13 48	AS MANUFACTURED		DATE STARTED <u>15.3.2013</u> DATE COMPLETED _____		S/S 8709		S-13656		INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL		OPRG. DEPT. <u>CTPD</u> ENG. DEPT. <u>AUT-PSAC</u>		RIYADH		SAUDI ARABIA		P	C421	CD-322986		SHT 244	CONT. 245	01
	REV. NO.	DATE	DESCRIPTION														



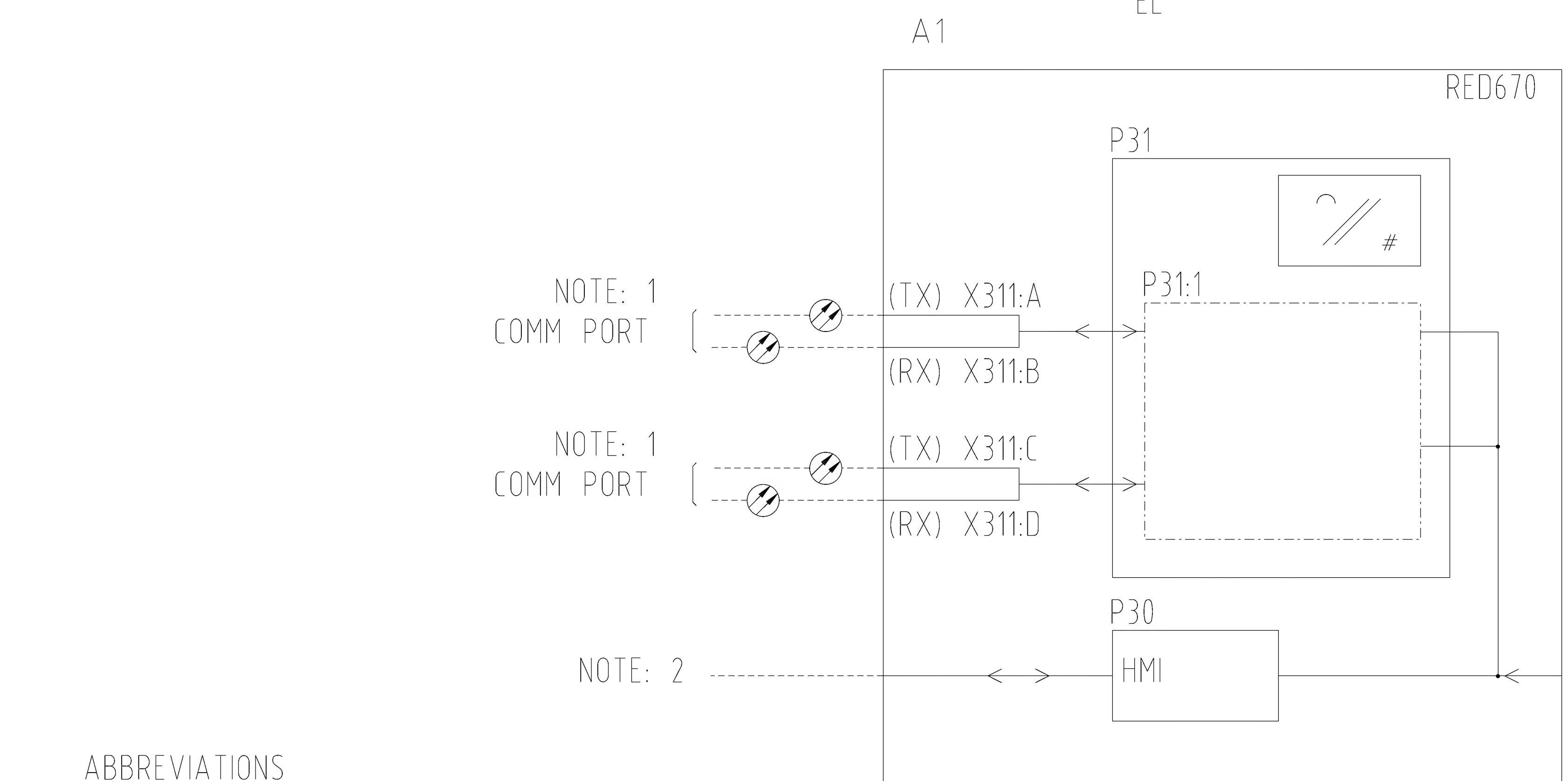
74IF		
	245/E7	
	SPARE	
	290/D4	
	SPARE	



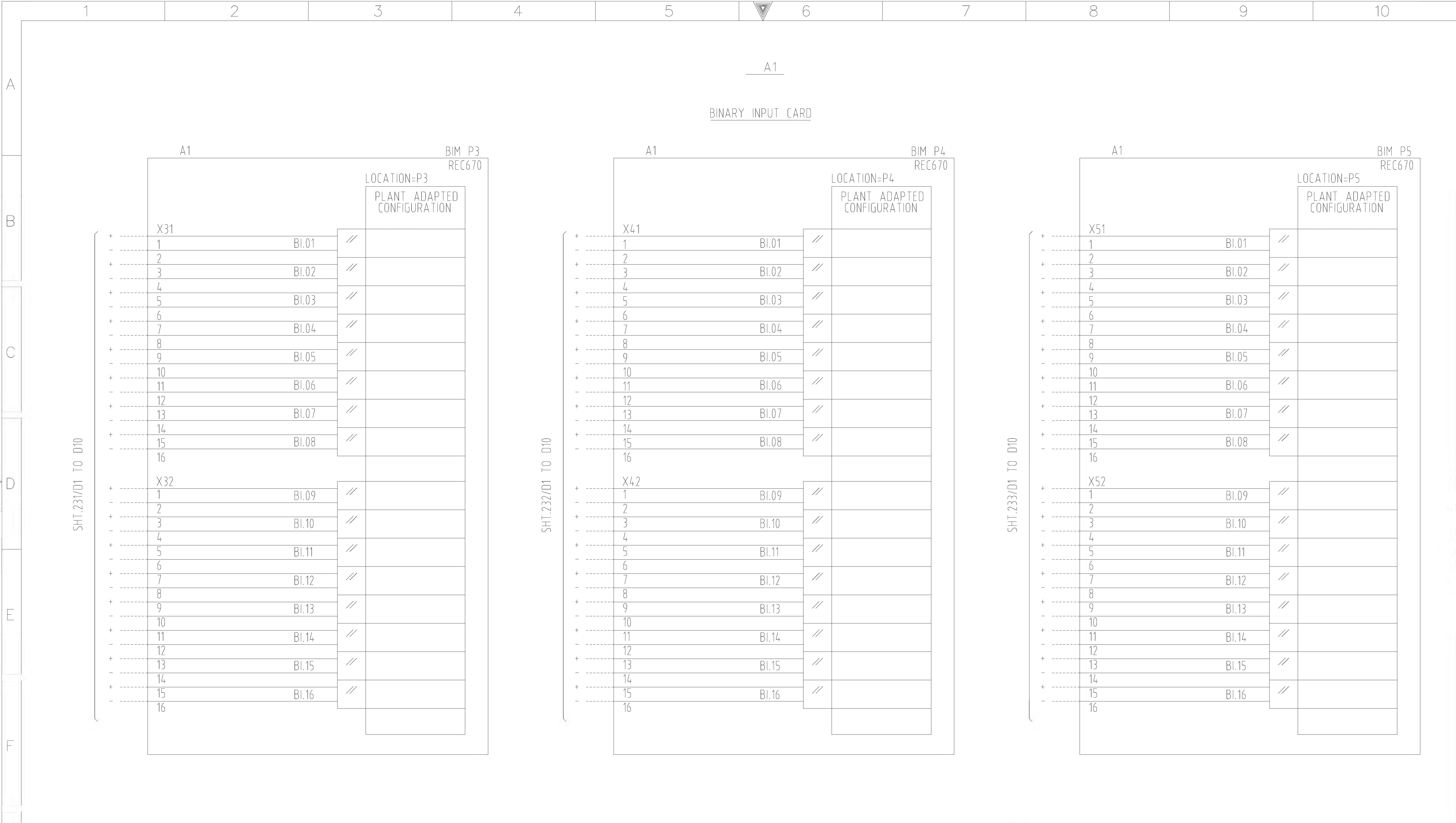
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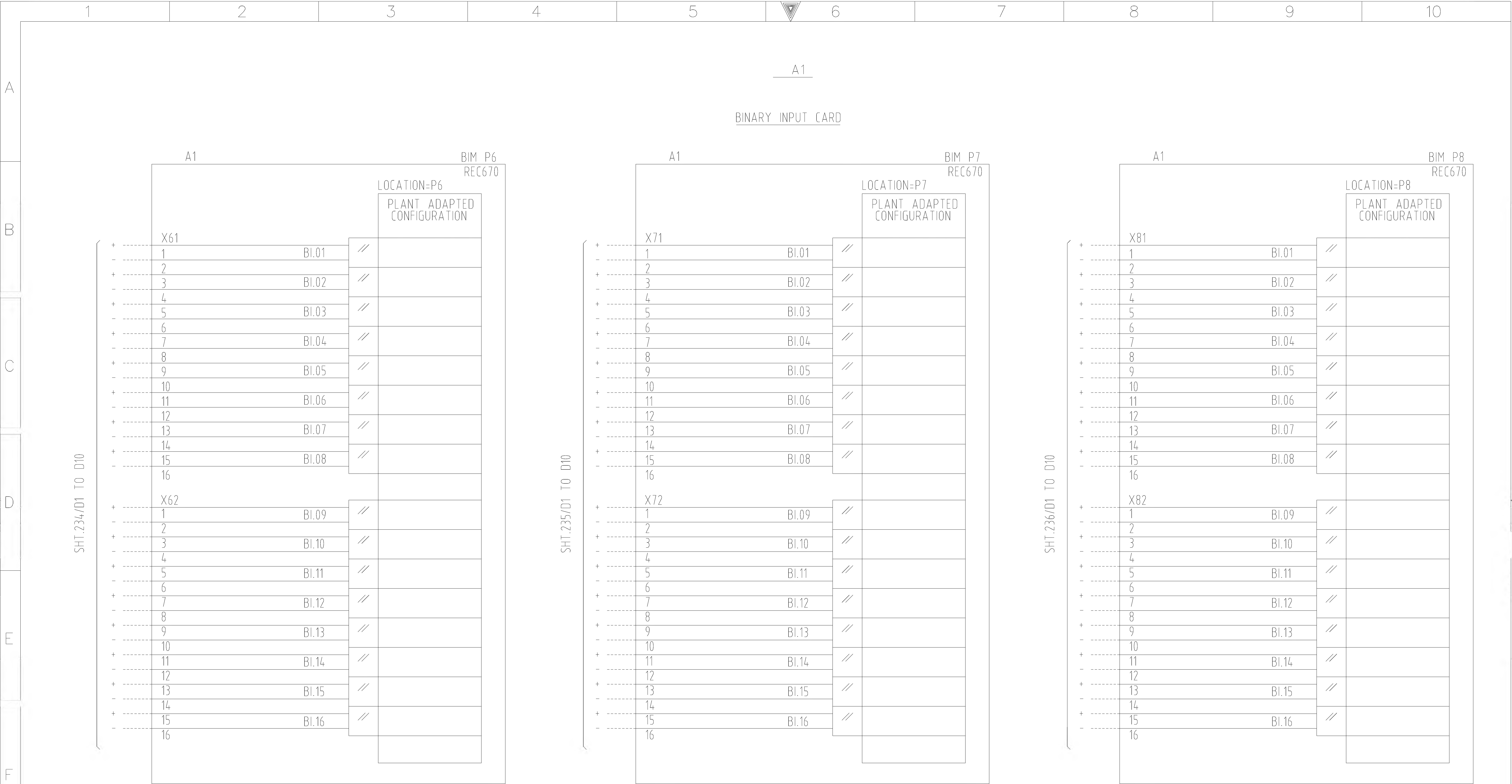


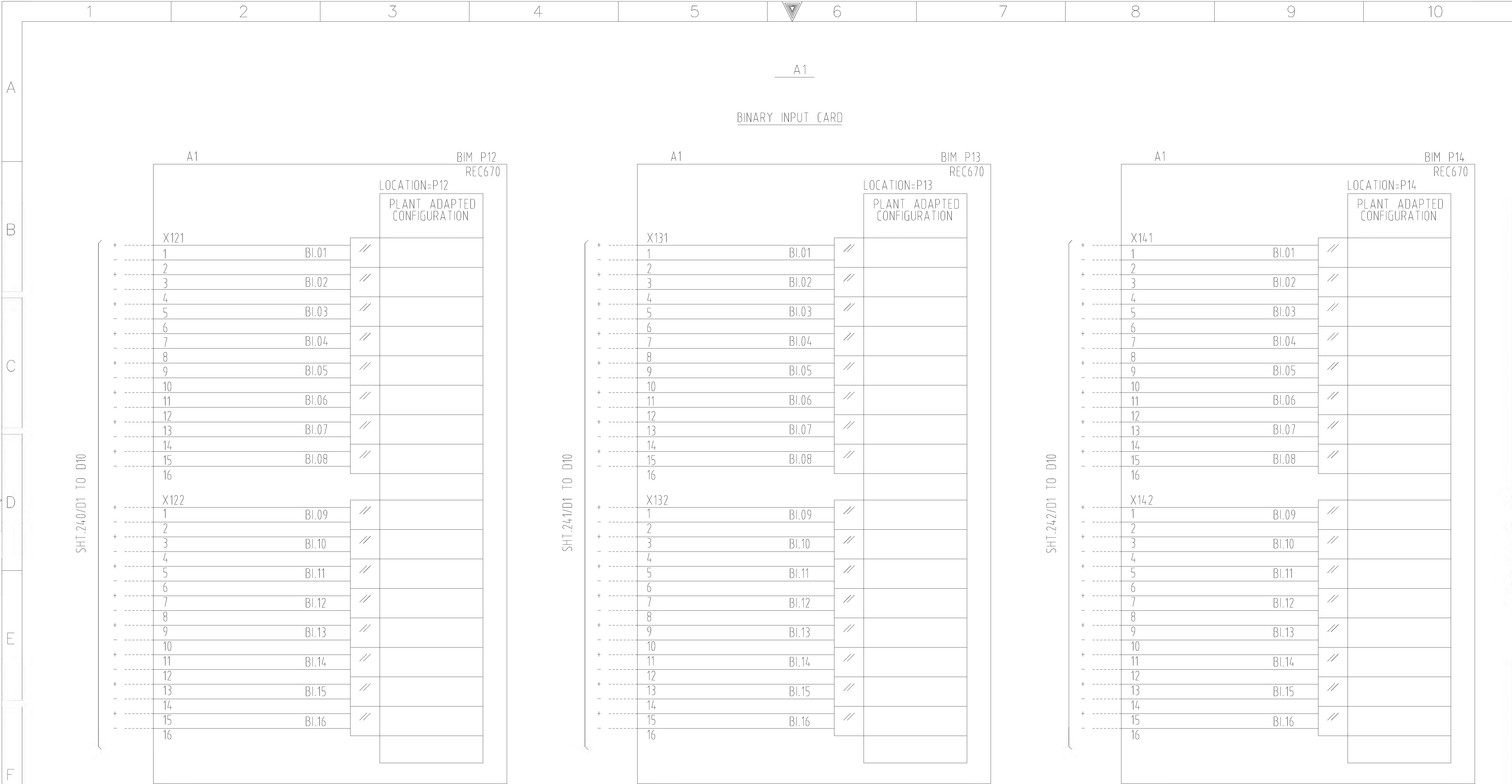
الشركة الوطنية لنقل الكهرباء

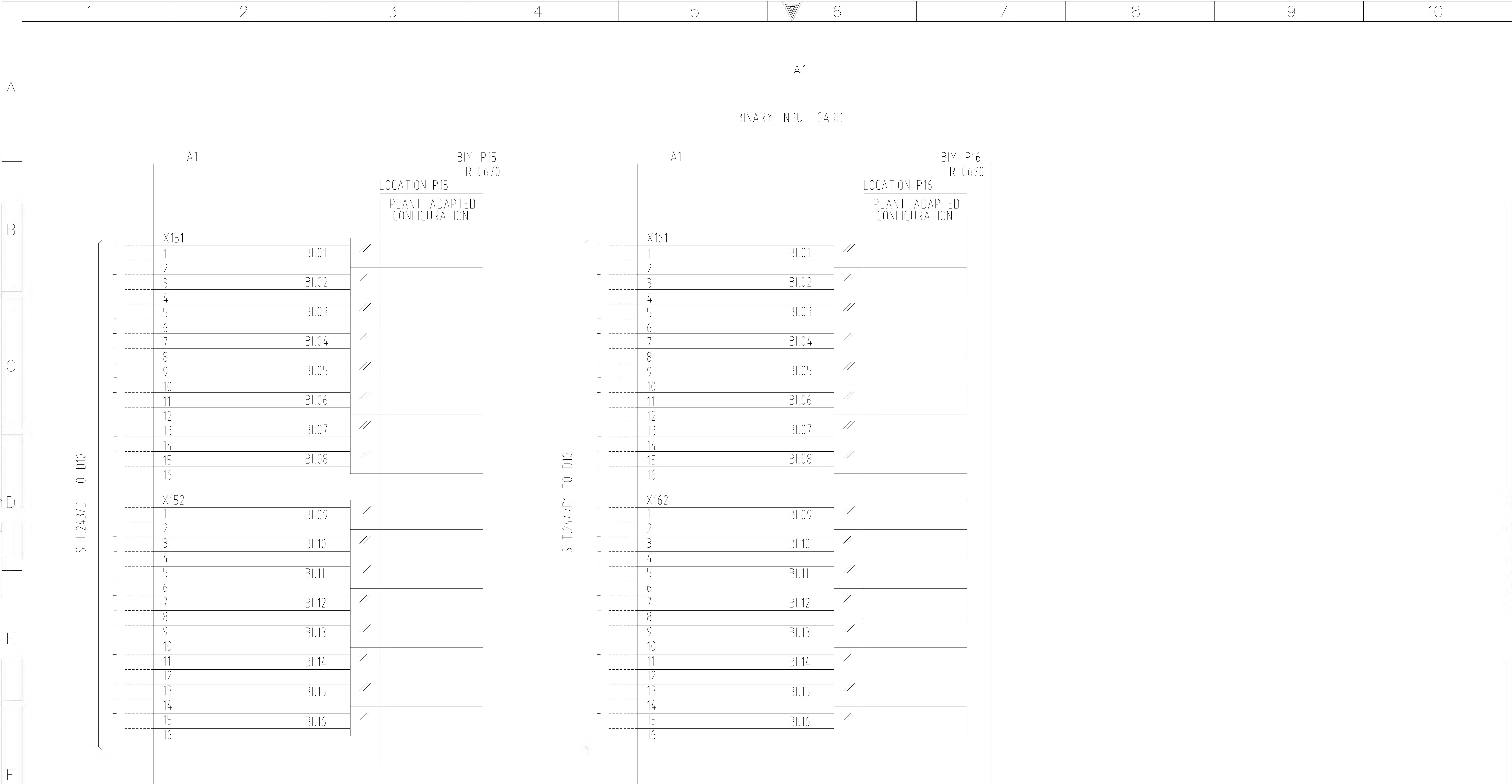



NGD200









G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		BLOCK REFERENCE		الشركة الوطنية لنقل الكهرباء					 نقل الكهرباء National Grid sa		
			DRAWN BY _____ RIZ _____ CHECKED BY _____ JKR				SAS INTERFACE PANEL +SAS I/F-1									
	01	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013 DATE COMPLETED _____		S/S 8709 S-13656		INDEX		PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
	00	13 20	FOR APPROVAL		OPRG. DEPT. _____ CTPD _____ ENG. DEPT. _____ AUT-PSAC		RIYADH SAUDI ARABIA		P	C421	CD-322986		SHT 296	CONT. 301	01	
	REV. NO.	DATE	DESCRIPTION													

A

B

C

D

E

F

INTERNAL REFERENCE
211/A3
211/B3
211/A3
211/B3
211/B3
211/C3
211/B3
211/C3
SPARE
SPARE

X3 AC CKT.			
1			1
2			2
3			3
4			4
5			5
6			6
7			7
8			8
9			9
10			10

INTERNAL REFERENCE
231/D1
231/D2
231/D3
231/D3
231/D4
231/D4
231/D5
231/D5
231/D6
231/D6
231/D7
231/D8
231/D8
231/D9
231/D9
231/D10
232/D2
232/D2
232/D3
232/D3
232/D4
232/D4
232/D5
232/D5
232/D6
232/D6
232/D7
232/D8
232/D8
232/D9
232/D9
232/D10
233/D2
233/D2
233/D3
233/D3
233/D4
233/D4
233/D5
233/D5
233/D6
233/D6
233/D7
233/D8
233/D8
233/D9
233/D9
233/D10
234/D2
234/D2

X51 CONTROL & PROTN.			
1			1
2			2
3			3
4			4
5			5
6			6
7			7
8			8
9			9
10			10
11			11
12			12
13			13
14			14
15			15
16			16
17			17
18			18
19			19
20			20
21			21
22			22
23			23
24			24
25			25
26			26
27			27
28			28
29			29
30			30
31			31
32			32
33			33
34			34
35			35
36			36
37			37
38			38
39			39
40			40
41			41
42			42
43			43
44			44
45			45
46			46
47			47
48			48
49			49
50			50

INTERNAL REFERENCE
234/D3
234/D3
234/D4
234/D4
234/D5
234/D5
234/D6
234/D6
234/D7
234/D8
234/D8
234/D9
234/D9
234/D10
235/D2
235/D2
235/D3
235/D3
235/D4
235/D4
235/D5
235/D5
235/D6
235/D6
235/D7
235/D8
235/D8
235/D9
235/D9
235/D10
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE

X51 CONTROL & PROTN.			
51			51
52			52
53			53
54			54
55			55
56			56
57			57
58			58
59			59
60			10
61			61
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80			80
81			81
82			82
83			83
84			84
85			85
86			86
87			87
88			88
89			89
90			90

INTERNAL REFERENCE
231/A2
231/A8
231/A8
231/A8
231/A9
231/A9
231/A9
231/A9
232/A2
232/A8
232/A8
232/A9
232/A9
232/A9
233/A2
233/A6
233/A7
233/A7
233/A8
233/A8
233/A8
233/A8
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234/A6
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234/A8
234/A8
235/A2
235/A6
235/A7
235/A7
235/A8
235/A8
235/A8
235/A8
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE

X41 DC CKTS.			
1			1
2			2
3			3
4			4
5			5
6			6
7			7
8			8
9			9
10			10
11			11
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40			40
41			41
42			42
43			43
44			44
45			45
46			46
47			47
48			48
49			49
50			50

INTERNAL REFERENCE
236/D1
236/D2
236/D3
236/D3
236/D4
236/D4
236/D5
236/D5
236/D6
236/D6
236/D7
236/D8
236/D8
236/D9
236/D9
236/D10
237/D2
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237/D10
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238/D6
238/D7
238/D8
238/D8
238/D9
238/D9
238/D10
239/D2
239/D2

X52 CONTROL & PROTN.			
1			1
2			2
3			3
4			4
5			5
6			6
7			7
8			8
9			9
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41			41
42			42
43			43
44			44
45			45
46			46
47			47
48			48
49			49
50			50

INTERNAL REFERENCE
239/D3
239/D3
239/D4
239/D4
239/D5
239/D5
239/D6
239/D6
239/D7
239/D8
239/D8
239/D9
239/D9
239/D10
240/D2
240/D2
240/D3
240/D3
240/D4
240/D4
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240/D5
240/D6
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240/D7
240/D8
240/D8
240/D9
240/D9
240/D10
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE
SPARE

X52 CONTROL & PROTN.			
51			51
52			52
53			53
54			54
55			55
56			56
57			57
58			58
59			59
60			10
61			61
62			62
63			63
64			64
65			65
66			6

G	AS-BUILT BY _____ DATE _____		CONTRACT NO. 11131113/00		JOB ORDER NO. S-13656		TERMINAL BLOCK REFERENCE		<div>نقل الكهرباء الشركة الوطنية لنقل الكهرباء National Grid SA</div> 						
				DRAWN BY RIZ		CHECKED BY JKR		SAS INTERFACE PANEL +SAS I/F-1							
	Ø1	13 48	AS MANUFACTURED		DATE STARTED 15.3.2013		DATE COMPLETED _____		S/S 8709		S-13656				
	ØØ	13 20	FOR APPROVAL		OPRG. DEPT. CTPD		ENG. DEPT. AUT-PSAC		RIYADH		SAUDI ARABIA				
	REV. NO.	DATE	DESCRIPTION						INDEX	PLANT NO.	DRAWING NUMBER		SHEET NO.		REV. NO.
									P	C421	CD-322986		SHT 302	CONT. NIL	01